SPECIFICATIONS

- WORK INCLUDED UNDER THIS SECTION SHALL BE NEW AND CONSIST OF ALL MATERIAL, LABOR, EQUIPMENT AND SERVICE INCIDENTAL TO THE INSTALLATION AND TESTING OF A COMPLETE ELECTRICAL SYSTEM. INCLUDING CONNECTIONS AS HEREINAFTER SPECIFIED AND AS SHOWN ON THE DRAWINGS.
- GENERAL CONDITIONS:
- A. ALL ELECTRICAL WORK SHALL BE IN FULL ACCORD WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL LOCAL. STATE AND FEDERAL LAWS AND REGULATIONS NFPA, APPLICABLE TO THE WORK, AND SHALL COMPLY WITH THE REQUIREMENTS OF THE SERVICE UTILITY COMPANIES, AND PRINCE GEORGES. CO. REQUIREMENTS.
- B. THE ELECTRICAL CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR HIS WORK AND SHALL INCLUDE THE COST FOR SAME IN HIS BID.
- C. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO EXAMINE THE ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ADDITIONAL ITEMS TO HIS WORK.
- D. ALL MATERIALS SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITERS' LABORATORIES, INC. AS CONFORMING TO THEIR STANDARDS.
- CUTTING AND PATCHING:
- WHERE IT IS NECESSARY TO CUT FLOORS. WALLS OR CEILINGS FOR THE INSTALLATION OF ANY ELECTRICAL WORK, SUCH CUTTING SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. ALL AFFECTED AREAS SHALL BE PATCHED BY THE ELECTRICAL CONTRACTOR TO MATCH ORIGINAL CONDITION AND APPEARANCE. BEFORE ANY CUTTING OR PATCHING, THE CONTRACTOR SHALL OBTAIN THE APPROVAL OF THE OWNER.
- WIRING METHODS:
- A. ALL CONDUCTORS SHALL BE COPPER. <u>ALUMINUM CONDUCTORS WILL NOT BE PERMITTED.</u> INSULATION SHALL BE 600 VOLT TYPE THWN. MINIMUM WIRE SIZE SHALL BE
- B. ALL WIRING SHALL BE INSTALLED IN STEEL CONDUIT OR EMT. MINIMUM CONDUIT SHALL BE 1/2 INCH UNLESS OTHERWISE NOTED.
- C. MC TYPE CABLE SHALL BE ACCEPTABLE WHERE PERMITTED BY LOCAL AND NATIONAL ELECTRIC CODES. D. WAREHOUSE AREA- NO BRANCH CIRCUIT WIRING SHALL BE PERMITTED TO BE INSTALL
- IN THE BOTTOM OR BELOW THE ROOF JOIST. E. GROUNDING OF THE ENTIRE ELECTRICAL SYSTEM SHALL BE IN ACCORDANCE WITH
- THE NATIONAL ELECTRICAL CODE. LIGHT FIXTURES:
- A. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LIGHT FIXTURES AS SHOWN ON PLANS AND IN SPECIFICATIONS. UNLESS OTHERWISE NOTED. B. ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT COMPLETE AND READY FOR SATISFACTORY OPERATION, ALL LIGHT FIXTURES, LAMPS, LAMP GUARDS AND LIGHTING CONTROLS. FIXTURES SHALL BE PROVIDED COMPLETE WITH ALL LAMPS, STRAPS, SUPPORTS, HANGERS, ETC. TO INSTALL THEM IN A SATISFACTORY MANNER.
- - A. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE AND SERVICE ALL WORKMANSHIP AND MATERIALS TO BE AS REQUIRED BY PLANS AND SPECIFICATIONS AND AS REPRESENTED BY HIM AND SHALL REPAIR OR REPLACE, AT NO ADDITIONAL COST TO THE OWNER, ANY PART THEREOF WHICH MAY BECOME DEFECTIVE, EXCEPT FOR NORMAL WEAR AND TEAR, WITHIN A PERIOD OF ONE (1) YEAR AFTER THE DATE OF FINAL ACCEPTANCE BY THE ARCHITECT.
- B. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR AND PAY FOR ANY DAMAGES CAUSED BY OR RESULTING FROM DEFECTS IN HIS WORK.
- CONNECTIONS:
- A. ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO LIGHTING AND RECEPTACLE PANELS, LOAD CIRCUITS AND OTHER EQUIPMENT REQUIRED FOR A COMPLETE SYSTEM. COORDINATE EXACT JUNCTION BOX AND POWER REQUIREMENTS FOR NEW EQUIPMENT.
- CLEANUP: THIS CONTRACTOR SHALL REMOVE ANY MATERIALS NOT INSTALLED IN HIS WORK WHICH WOULD INTERFERE WITH THE WORK OF OTHER CONTRACTORS AS DIRECTED BY THE OWNER OR ENGINEER. AT THE COMPLETION OF THE WORK, THE ELECTRICAL CONTRACTOR SHALL CLEAN UP AND REMOVE FROM THE PREMISES ALL DEBRIS AND MATERIALS NOT INSTALLED,
- OIL, GREASE AND LEAVE WORK IN OTHERWISWE PERFECT CONDITION. UTILITIES THE INDICATED MAIN INCOMING UTILITY REQUIREMENTS ARE FOR BID AND PERMIT PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND COORDINATING THE EXACT REQUIREMENTS

SO THAT THE PREMISES WILL BE LEFT CLEAN. CLEAN ALL CABINETS AND CONDUITS OF

- WITH THE RESPECTIVE UTILITY COMPANIES.) OWNER SHALL PAY FOR ALL POWER CO. FACILITIES CHARGES.
- 2) CONTRACTOR SHALL PROVIDE AND COORDINATE WITH LOCAL POWER CO. a) ALL REQUIREMENTS
- b) ELECTRICAL LOAD INFORMATION c) DRAWINGS
- B. TELEPHONE) CONTRACTOR SHALL PROVIDE AND COORDINATE WITH LOCAL TELEPHONE CO. ALL REQUIRMENTS 2) DRAWINGS
- 1) CONTRACTOR SHALL PROVIDE AND COORDINATE WITH LOCAL CABLE CO. ALL REQUIREMENT. 2) DRAWINGS
- 10. INTERIOR
- A. TELEPHONE AND DATA CABLING: SHALL BE PROVIDED BY OWNER EQUIPMENT INSTALLER. THIS SHALL INCLUDE CABLE, CONNECTION AND DEVICE PLATE. CONTRACTOR SHALL PROVIDE EMPTY RACEWAY. STUB OUT ABOVE ACCESSIBLE CEILING FROM WALL OUTLET BOX.

DEMOLITION & REMOVAL NOTES

- CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL DEVICES INCLUDING ALL WIRING, LIGHTING FIXTURES, RECEPTACLES, PANELS, JUNCTION BOXES, SWITCHES, CONDUIT (NOT CONCEALED) FROM THE
- 2. VISIT SITE BEFORE FINAL BIDDING TO ASCERTAIN WHAT EXISTING ITEMS ARE TO BE REMOVED AND INCLUDE SAME IN BID.
- 3. THIS SPACE MUST BE VOID OF ALL EXISTING ELECTRICAL EQUIPMENT BEFORE ANY NEW WORK IS BEGUN.

- 1. ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS OF STRUCTURE. VERIFY DOOR SWINGS BEFORE INSTALLING LIGHT SWITCHES. LOCATE ON LOCKED SIDE OF DOOR 48" ABOVE FINISHED FLOOR UNLESS
- HOMERUNS WITHOUT BRANCH CIRCUIT BREAKER INFORMATION SHALL HAVE 1P, 20A, C/B'S. WHERE CONDUIT SIZE, AND NUMBER AND SIZE OF WIRES IS NOT GIVEN, THE FOLLOWING SHALL APPLY:
- ONE BRANCH CIRCUIT
- 2 #12, 3/4°C. - TWO BRANCH CIRCUITS 3 #12, 3/4°C. - THREE BRANCH CIRCUITS 4 #12, 3/4"C.
- THE CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANEL. HOMERUNS OF SIMILAR PHASE CIRCUITS MAY BE COMBINED IN ONE CONDUIT WITH A COMMON NEUTRAL.
- PROVIDE IDENTIFICATION PLATES OF BLACK LAMINATED PLASTIC WITH 1/2" WHITE LETTERS FOR ALL ELECTRICAL EQUIPMENT SUCH AS PANELS, SWITCHES, STARTERS, ETC.
- WHERE OUTLETS ARE INDICATED IN CLOSE PROXIMITY TO EACH OTHER, PROVIDE
- 6. ALL RECEPTACLE OUTLET LOCATIONS SHALL BE COORDINATED WITH THE OWNER PRIOR
- TO PLACEMENT OF SAME. CONTRACTOR SHALL COORDINATE LOCATION AND ELECTRICAL CHARACTERISTICS OF
- 3. PROVIDE ALL ADDITIONAL WIRES REQUIRED FOR SWITCHING AND CONTROL FUNCTIONS INDICATED OR REQUIRED. INCREASE ASSOCIATED CONDUIT SIZE ACCORDINGLY.
- 9. <u>ALL WORK SHALL BE CONCEALED UNLESS OTHERWISE INDICATED.</u>

EQUIPMENT TO SUIT ACTUAL EQUIPMENT BEING PROVIDED.

GANGED DIVIDED OUTLET BOX WITH COMMON COVERPLATE.

- 10. CONTRACTOR SHALL COORDINATE HIS WORK WITH WORK OF OTHER TRADES TO AVOID PHYSICAL INTERFERENCES OR IMPROPER INSTALLATION. FAILURE TO DO SO SHALL BE CAUSE FOR CONTRACTOR TO REMOVE AND REINSTALL HIS WORK AT NO ADDITIONAL EXPENSE TO THE OWNER.
- BIDDERS SHALL VERIFY LOCAL CODE REQUIREMENTS PRIOR TO BID SUBMITTAL AND SHALL INCLUDE ALL COSTS FOR COMPLETE COMPLIANCE WITH SAME.
- 12. DO NOT SCALE THE DRAWINGS.
- CONSULT ARCHITECTURAL PLANS AND DETAILS FOR CONSTRUCTION, HEAD ROOM, ROOM FINISHES, FURRED CEILINGS, EXACT LOCATIONS OF FIXTURES, EQUIPMENT, OUTLETS, ETC.

BASIC MATERIALS AND METHODS

- 1. THE ELECTRICAL SYSTEM SHALL BE CONDUIT WITH A MINIMUM TRADE SIZE OF 3/4".
- MOTORS AND VIBRATING EQUIPMENT SHALL BE CONNECTED WITH A SHORT (APPROXIMATELY TWO (2) FEET) LENGTH OF FLEXIBLE METAL CONDUIT OR LIQUID-TIGHT FLEXIBLE METAL CONDUIT WITH EXPOSED EQUIPMENT GROUND TO COMPLY WITH NEC.
- FITTINGS, COUPLINGS AND ACCESSORIES SHALL BE COMPATIBLE WITH THE CONDUIT MATERIAL. FITTINGS AND COUPLINGS FOR ELECTRIC METALLIC TUBING SHALL BE OF STEEL AND SHALL BE OF THE COMPRESSION TYPE, WITH NYLON THROAT.
- PULL AND JUNCTION BOXES SHALL BE PROVIDED WHERE INDICATED AND REQUIRED OF THE TYPE AND SIZE FOR THE INSTALLATION OF THE ELECTRICAL SYSTEM AND SHALL BE
- OUTLET BOXES SHALL BE GALVANIZED SHEET STEEL OF THE TYPE AND SIZE APPROVED FOR THE INTENDED USE.
- DEVICE PLATES SHALL BE TYPE 302 SATIN FINISH STAINLESS STEEL. WHERE GANG COMBINATIONS ARE REQUIRED, THE COMBINATIONS ARE TO BE PROVIDED AS A SINGLE
- 7.. EMPTY CONDUITS (EC) INSTALL A No.12 THHN OR NYLON PULL WIRE.
- FLEXIBLE METAL CONDUIT USED FOR CONNECTION OF LIGHTING FIXTURES, RECEPTACLE OUTLETS AND AS OTHERWISE SHOWN ON DRAWINGS. SHALL BE SUPPORTED AND BONDED IN ACCORDANCE WITH N.E.C. ARTICLE 350 AND 518.
- 9. ALL CIRCUIT CONDUCTORS SHALL BE MARKED OR TAGGED IN THE PANELBOARDS TO IDENTIFY ITEMS SERVED AND THEIR LOCATION.
- 10. ALL THE BOXES AND CONDUCTORS SHALL BE MARKED TO INDICATE THE VOLTAGE AND CIRCUIT NUMBERS.
- MOTOR STARTERS AND ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND WITH THE N.E.C. COORDINATE THE MOTOR FOR PROPER ROTATION AND PROVIDE OVERLOAD THERMAL UNITS OF PROPER RATING.

PANELBOARD NOTES

- 1. ALL PANEL BOARDS SHALL BE NEW AND SHALL BE PROVIDED WITH COPPER BUSSES S/N AND EQUIPMENT
- 2. PANELBOARDS SHALL BE EQUIPPED WITH QUICK REMOVAL DOORS, MANUFACTURER'S NAME PLATE WITH CHARACTERISTICS AND ALL KEYED ALIKE.
- CONTRACTOR SHALL VERIFY MOUNTING OF ALL PANELBOARDS PRIOR TO RELEASE FOR FABRICATION.
- 4. PANELBOARDS SHALL BE SUITABLE FOR FLUSH AND/OR SURFACE MOUNTING.
- 5. PANELBOARDS SHALL BE PROVIDED WITH A TYPEWRITTEN DIRECTORY. HANDWRITTEN IS NOT <u>ACCEPTABLE.</u>
- 6. PANELBOARDS SHALL BE PROVIDED WITH PHENOLIC PLASTIC ETCHED NAMEPLATES WITH THE FOLLOWING:
 - 1) PANEL DESIGNATION PANEL SOURCE OF SUPPLY WITH CIRCUIT NUMBER 3) PANEL FEEDER SIZE
- 7. CONTRACTOR SHALL CHECK ALL PANELBOARD BUSSES FOR UNBALLANCED CONDITIONS AND BALANCE PANEL BETWEEN PHASES AS CLOSE AS POSSIBLE. SUBMIT AMPERE READING FOR EACH PANELBOARD TO ELECTRICAL ENGINEER FOR REVIEW AND APPROVAL.
- 8. FAULT CURRENT RATING a) MAIN SERVICE 22 K b) PANEL BOARD 22 K U. O. N.

LIGHTING FIXTURE NOTES

- PROVIDE LIGHTING FIXTURES INSTALLED IN LOCATIONS AS SHOWN ON ARCHITECTURAL REFLECTIVE CEILING PLANS
- 2. IF MOUNTING HEIGHTS FOR WALL FIXTURES ARE NOT SHOWN, COORDINATE WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN.
- NOT USED
- CONTRACTOR SHALL PROVIDE ALL PLASTER RINGS, PLASTER FRAMES, TRIM RINGS, SLOPE ADAPTERS, ACCESSORIES AND ASSOCIATED MATERIALS FOR A COMPLETE INSTALLATION FOR ALL FIXTURE TYPES AT NO ADDITIONAL COST TO THE OWNER.
- PROVIDE FOR NEW LIGHTING THE FOLLOWING: - FLUORESCENT BALLAST (T8) SHALL BE ENERGY SAVING ELECTRONIC
- FLUORESCENT BALLAST (PL) SHALL BE ENERGY SAVING ELECTRONIC
- ALL T8 32 WATT OCTRON FLUORESCENT FIXTURES SHALL BE WARM WHITE SP-35K
- ALL PL LAMPS SHALL BE RATED 35K. - INCANDESCENT LAMPS SHALL BE RATED 130 VOLTS.
- 6. ALL EMERGENCY LIGHTING SHALL BE CONNECTED AHEAD OF THE LIGHTING SWITCH TO COMPLY WITH NEC ARTICLE 7-12 (e) UNIT EQUIPMENT. THE BRANCH CIRCUIT BREAKER SERVING THE BRANCH CIRCUITS WITH UNIT EQUIPMENT SHALL BE PROVIDED WITH A BREAKER GUARD.
- COORDINATE THE LOCATION OF LIGHTING FIXTURES TO ACCOMMODATE THE MECHANICAL AND PLUMBING INSTALLATION

ELECTRICAL/ MECHANICAL/ PLUMBING COORDINATION

ELECTRICAL CONTRACTOR SHALL OBTAIN FROM MECHANICAL/ PLUMBING CONTRACTORS WITHIN 30 DAYS OF RECEIPT OF CONTRACT A COMPLETE SET OF MECHANICAL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. THE ELECTRICAL SHOP DRAWING SHALL BE SUBMITTED SHOWING ALL REQUIRED ELECTRICAL CONNECTIONS, MINIMUM CIRCUIT AMPS, WIRE SIZE OVER CURRENT PROTECTION AND CONNECTION TYPES AS A RESULT OF THE MECHANICAL/ PLUMBING

SYMBOLS LIST

0 PENDANT CEILING OUTLET FOR A FLUORESCENT LIGHTING FIXTURE.

- CEILING OUTLET FOR A FLUORESCENT LIGHTING FIXTURE.
- CEILING OUTLET FOR A LIGHTING FIXTURE.
- CEILING, WALL EXIT LIGHTING FIXTURE-SINGLE FACE WITH INTEGAL BATTERY CEILING OR WALL
- MOUNTED ARROWS INDICATE DIRECTION LED TYPE.
- SINGLE POLE FLUSH TOGGLE SWITCH +48" AFF 3 AND 4-WAY FLUSH TOGGLE SWITCH. +48" AFF

WALL OUTLET FOR A WALL MOUNTED LIGHTING FIXTURE

- THERMAL MOTOR SWITCH-SIZE AS REQUIRED.
- LUTRON DIMMER 2000 WATT RATING +48" AFF UNLESS NOTED OTHERWISE
- WALL OUTLET WITH A DUPLEX RECEPTACLE 2P, 3W, 125V, 20 AMP, GROUNDING TYPE AT 18" A.F.F.
 - DUPLEX RECEPTACLE MOUNTED 48" AFF
- DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER PROTECTION LEVITON 8599-I. ISOLATED GROUND DUPLEX RECEPTACLE 18" A.F.F.
 - VOICE/DATA WALL OUTLET (+18" AFF U.O.N.) WITH ONE INCH EMPTY CONDUIT W/ PULL STRING STUBBED ABOVE CEILING. -STRING SHALL BE TAGGED FOR IDENTIFICATION PROVIDE PROPER TELEPHONE/DATA CABLING BACK TO TELEPHONE MAIN SPACE.
- ISOLATED, INSULATED GROUND FOR I.G. RECEPTS

CONNECTED UNDER ELECTRICAL WORK.

- CONCEALED BRANCH CIRCUIT WIRING IN WALLS OR ABOVE CEILING-CROSSMARKS AND NUMERALS INDICATE NUMBER AND AWG SIZE OF CONDUCTORS RESPECTIVELY-2#12 + EG IS IMPLIED WHEN RUN IS UNMARKED.
- CONCEALED WIRING IN SLAB. HOMERUN WIRING TO DESIGNATED PANELBOARD—NUMERALS INDICATE CIRCUIT NUMBERS.
 - MOTOR CONNECTION.
- SAFETY SWITCH: FSS FUSIBLE, NFSS-NONFUSIBLE. MOTOR STARTER +60" AFF.- FURNISHED UNDER MECHANICAL WORK. INSTALLED AND FINAL
- UNLESS OTHERWISE NOTED.
- FIRE ALARM STRIKING STATION AUDIO/VISUAL FIRE ALARM DEVICE (STROBE/HORN) - NUMERAL INDICATES STROBE CANDELA
- VISUAL FIRE ALARM DEVICE (STROBE ONLY) NUMERAL INDICATES STROBE CANDELA RATING.
- PHOTOELECTRIC SMOKE DETECTOR
- 1. THE LETTERS NEXT TO EACH LIGHTINGS FIXTURE INDICATES LIGHTING FIXTURE TYPE SHOWN ON LIGHTING FIXTURE SCHEDULE.

MECHANICAL/ELECTRICAL COORDINATION REQUIREMENTS

MECHANICAL CONTRACTOR WITHIN 20 DAYS OF RECEIPT OF CONTRACT TO PROVIDE TO THE ELECTRICAL CONTRACTOR A COMPLETE SET OF MECHANICAL EQUIPMENT SHOP DRAWINGS FOR ALL MECHANCIAL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS OR POWER. SHOP DRAWINGS SHALL SHOW ALL REQUIRED ELECTRICAL CONNECTIONS, MINIMUM CIRCUIT AMPS. WIRE SIZES. OVER CURRENT PROTECTION. CONNECTION TYPES AND ANY OTHER INFORMATION REQUIRED FOR THE PROPER EQUIPMENT INSTALLATION AND OPERATION.

MECHANICAL AND ELECTRICAL CONTRACTORS SHALL COORDINATE THIS INFORMATION AND PREPARE A CONNECTION SCHEDULE FOR SUBMISSION AND REVIEW BY ENGINEER BEFORE PROCEEDING WITH WORK.

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GTMARCHITECTS

7735 OLD GEORGETOWN ROAD

SUITE 700

(240)333-2000

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BETHESDA, MD 20814

(240)333-2001 FAX

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REVISIONS: DESIGN DEVELOP. 09.13.05 ISSUE FOR PERMIT 01.22.0" Î\PERMIT COMMENTS ||,03,08

BID SET 09.08.09 SEAL:

DRAWN BY: REL CHECKED BY:

NONE

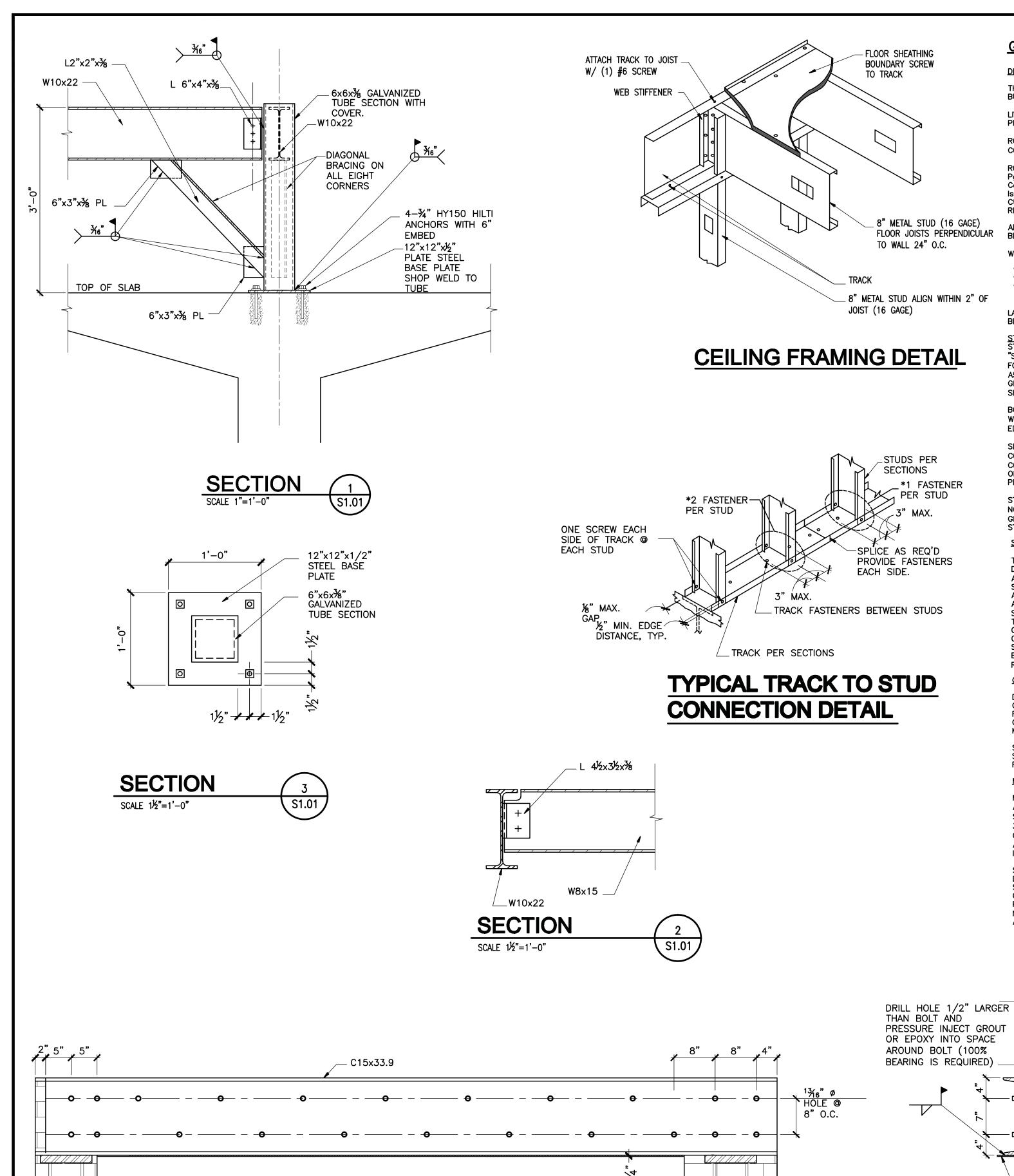
08/03/05 PROJECT NO. 03.0299 DRAWING NO.

SCALE:

NOTE:
THE CONSTRUCTION OF THIS PROJECT REQUIRES THE CONTRACTOR TO THE CONSTRUCTION OF THIS PROJECT REGULIRES THE CONTRACTOR TO COORDINATE WORK SHOWN ON THIS DRAWING WITH THAT OF ALL OTHER TRADES. IN ADDITION, ALL PIPING, CONDUITS, DUCTWORK, ETC., ARE TO BE INSTALLED WITHIN THE JOISTS / GIRDERS AND TO MAINTAIN THE MINIMUM REQUIRED CLEARANCES, WON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES RESULTING FROM CONFLICTS WITH OTHER TRADES AND WORK. IN THE EVENT OF ANY CONFLICTS THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OR THEIR REPRESENTATIVE IN WRITING FOR CLARIFICATION BEFORE PROCEEDING.

HURST & ASSOCIATES CONSULTING ENGINEERS 308 HILLWOOD AVE. FALLS CHURCH, VA. 22046 (703) 534-7872

HURST & Associates Project No. 05-30



9'-6"

WALL OPENING REINFORCEMENT

12'-0"

₩.

1'-0"

GENERAL NOTES

DESIGN LOADS

ls = 1.1

THE FOLLOWING DESIGN LIVE LOADS HAVE BEEN USED, AS SPECIFIED IN INTERNATIONAL BUILDING CODE 2003, CHAPTER 16.

LIVE LOAD (SECTION 1607)
PROJECTION AND CONTROL ROOMS50 PSF

ROOF LIVE LOAD (SECTION 1607.11.2) OR MINIMUM MD'. REQUIREMENT, WHICHEVER

CONTROLS.....30 LBS./SQ. FT.

ROOF SNOW LOAD (SECTION 1608). BASED ON ASCE 7-02.

Pg = 30.0 PSF
Ce = 1.1

Ct = 1.0REQUIRED Pf = 0.7x1x1.1x1.1x30 = 23 PSF.

ADDITIONAL LOADS DUE TO SNOW DRIFTS AS PER PROVISIONS OF ASCE 7-02 HAVE BEEN CONSIDERED WHERE APPLICABLE.

WIND LOAD (SECTION 1609).
BASIC WIND SPEED......90 MPH

WIND DIRECTIONALITY FACTOR..........0.85
WIND LOAD IMPORTANCE FACTOR.......1.10

WIND EXPOSURE CATEGORY.....EXPOSURE B.

LATERAL LOADS AGAINST BUILDING WALLS DUE TO EARTH PRESSURE ARE ASSUMED TO BE 45 LBS PER SQ. FT. PER FT. DEPTH.

STRUCTURAL STEEL
STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC
"SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL
FOR BUILDINGS". ALL WIDE FLANGE BEAMS & CHANNELS SHALL CONFORM TO ASTM
A572 OR A992, GRADE 50 (FY = 50 KSI). STEEL PIPE SHALL CONFORM TO ASTM A53,
GRADE B. STEEL TUBE SHALL CONFORM TO ASTM A500, GRADE B. ALL OTHER STEEL
SHALL CONFORM TO ASTM A36 (FY = 36 KSI).

BOLTED, WELDED AND COMBINATION CONNECTIONS SHALL BE DETAILED IN ACCORDANCE WITH "FRAMED BEAM CONNECTIONS" USING TWO WEB ANGLES AS SHOWN IN THE LATEST EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION" (ALLOWABLE STRESS DESIGN).

SEATED CONNECTIONS SHALL BE DETAILED IN ACCORDANCE WITH "SEATED BEAM CONNECTIONS" AS SHOWN IN THE LATEST EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION", AND MAY BE USED TO CONNECT STEEL JOISTS TO COLUMN FLANGES OR STEEL BEAMS TO GIRDERS AND GIRDERS TO COLUMN. PROVIDE WELDED STABILIZER PLATES OR ANGLES AT TOP OF BEAMS AT ALL SEATED CONNECTIONS.

STEEL CONNECTIONS AT ENDS OF MEMBERS SHALL BE DESIGNED (FOR THE REACTIONS NOTED ON THE DRAWINGS) FOR THE FRACTION OF THE "ALLOWABLE UNIFORM LOAD" AS GIVEN IN THE AISC MANUAL (WcL/2) FOR THE MEMBER, THE SPAN AND GRADE OF STEEL.

SHOP DRAWINGS

THE GENERAL CONTRACTOR (OR CONSTRUCTION MANAGER) SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS FOR APPROVAL (ONE REPRODUCIBLE PLUS NOT MORE THAN TWO PRINTS). THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT IF THE GENERAL CONTRACTOR FAILS TO OBTAIN APPROVAL OF THE SHOP DRAWINGS. THE GENERAL CONTRACTOR SHALL INFORM THE STRUCTURAL ENGINEER IN WRITING CONCERNING DEVIATIONS AND/OR OMISSIONS FROM THE CONTRACT DOCUMENTS AT THE TIME OF SHOP DRAWING SUBMISSION. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS AND SHALL MAKE ALL CORRECTIONS HE DEEMS NECESSARY BEFORE SUBMISSION. THE GENERAL CONTRACTOR SHALL STATE ON THE SHOP DRAWINGS THAT CONTRACT DOCUMENT REQUIREMENTS HAVE BEEN MET AND THAT ALL DIMENSIONS, CONDITIONS AND QUANTITIES HAVE BEEN REVIEWED AND VERIFIED AS SHOWN AND/OR CORRECTED ON THE SHOP DRAWINGS.

COLD-FORMED LIGHT STEEL FRAMING

DESIGN OF FRAMING MEMBERS SHALL CONFORM TO AISI SPECIFICATION FOR DESIGN OF COLD—FORMED STEEL STRUCTURAL MEMBERS. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN AND DETAILING OF ALL STRUCTURAL MEMBERS AND CONNECTIONS IN CONFORMANCE WITH THE GENERAL LAYOUT, PROPERTIES AND BASIC MEMBER SIZES SPECIFIED.

STRUCTURAL STUDS, JOISTS, BRIDGING AND ACCESSORIES SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 PSI FOR 16 GAGE AND THICKER MATERIALS, AND 33,000 PSI FOR MATERIALS THINNER THAN 16 GAGE.

MISCELLANEOUS STEEL

¼" COVER

MIDSPAN SECTION DETAIL

1'-6"

S6.01

MISCELLANEOUS STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", AND SHALL BE ASTM A36. BOLTS SHALL BE HIGH STRENGTH 3/4" DIAMETER CONFORMING TO ASTM A325. WELDING SHALL BE DONE ONLY BY CERTIFIED WELDERS. WELD IN ACCORDANCE WITH THE AWS "STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION". STRUCTURAL STEEL SURFACES CAST INTO CONCRETE SHALL BE UNPAINTED.

SUBMIT STRUCTURAL STEEL SHOP DRAWINGS SHOWING COMPLETE DIMENSIONS AND DETAILS FOR APPROVAL PRIOR TO FABRICATION. THE STRUCTURAL STEEL SUBCONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING, VERIFICATION, AND FOR COORDINATION OF DIMENSIONS AND DETAILS WITH THE STRUCTURAL AND OTHER PORTIONS OF THE CONTRACT DRAWINGS. THE STRUCTURAL CONTRACT DRAWINGS SHALL NOT BE REPRODUCED AS SHOP DRAWINGS UNLESS THE STRUCTURAL ENGINEER'S APPROVAL IS OBTAINED IN WRITING.

C15X33.9

₋2−1" ø

THRU BOLTS

STAGGERED

@ 8" O.C.

SEE ARCH. DWG.

PRESSURE INJECTED

GROUT OR EPOXY

5000 PSI NON SHRINK

SOFFIT OF ROOF DRILL HOLE 1/2" LARGER FILL VOIDS IN MASONRY THAN BOLT AND PRIOR TO PRESSURE INJECT GROUT SAW CUTTING OR EPOXY INTO SPACE OF WALL AROUND BOLT (100% BEARING IS REQUIRED) C15X33.9 2-1" Ø _ THRU BOLTS STAGGERED **©** 8" O.C. 10"x18"x1½" BEARING PLATE WITH $4-\frac{3}{4}$ øx8" LONG STUDS

> BEARING SECTION DETAIL 7 SCALE 1"=1'-0" S6.01

SK&A Project No. : 05-783

Smislova, Kehnemui & Associates, P.A.
Consulting Structural Engineers

6101 Executive Boulevard
Rockville, Maryland 20852

Telephone (301) 881-1441

LATERAL BRACING OF STRUCTURAL ELEMENTS

PROVIDE ADEQUATE BRACING AND SHORING FOR BASEMENT, RETAINING AND PIT WALLS. BRACE BASEMENT AND PIT WALLS UNTIL SUPPORTING FLOORS ABOVE ARE IN PLACE AND HAVE ATTAINED DESIGN STRENGTH. DO NOT BACKFILL WALLS UNTIL AFTER FLOORS AT THE TOP AND BASE OF THE WALLS ARE IN PLACE. WHERE BACKFILL IS REQUIRED ON BOTH SIDES OF A WALL, BACKFILL BOTH SIDES SIMULTANEOUSLY WITH THE GRADE DIFFERENCE NOT TO EXCEED 2'-0" AT ANY TIME.

LATERALLY BRACE BUILDING WALLS IN AN APPROVED MANNER AT A MAXIMUM HORIZONTAL SPACING OF 8'-0" O.C. (6'-0" O.C.) BRACING SHALL REMAIN IN PLACE UNTIL ROOF OR FLOOR MEMBERS HAVE BEEN SECURELY ANCHORED TO THE WALL

PROVIDE ADEQUATE BRACING AND GUY-WIRING FOR STEEL FRAME AND MEMBERS DURING STEEL ERECTION AND CONCRETE WORK ON DECK. STEEL FRAME SHALL BE PLUMB WITHIN AISC TOLERANCES AND PROJECT SPECIFICATION REQUIREMENTS.

WALLS SUPPORTED BY OR CONNECTED TO STEEL FLOOR MEMBERS SHALL NOT BE PLACED UNTIL PERMANENT ANCHORAGE AND BRACING SYSTEMS HAVE BEEN INSTALLED, AND UNTIL CONCRETE WORK FOR FLOOR DECKS IS COMPLETED. WALLS AND PARAPETS SUPPORTED BY OR CONNECTED TO STEEL ROOF BEAMS SHALL NOT BE PLACED UNTIL ROOF DECK INSTALLATION IS COMPLETE.

OPENINGS AND PIPE SLEEVES

SIZE AND LOCATION OF ALL OPENINGS SHALL BE COORDINATED WITH ARCHITECTURAL, ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS. FORM OPENINGS AND PROVIDE PIPE SLEEVES WHEN POURING CONCRETE. HOLES LARGER THAN 2" IN DIAMETER SHALL NOT BE CUT INTO SLABS WITHOUT PERMISSION OF THE STRUCTURAL ENGINEER. ARRANGE REINFORCING AROUND OPENINGS AS SHOWN IN TYPICAL DETAILS. EMBEDDED PIPES OR CONDUITS SHALL BE SPACED AT LEAST THREE DIAMETERS ON CENTERS, UNLESS OTHERWISE NOTED. EXCESSIVE CROSSING OVER OF CONDUITS IN SLABS WILL NOT BE PERMITTED. PIPE SLEEVES SHALL NOT BE SPACED CLOSER THAN 8" CLEAR FROM ANY COLUMN UNLESS NOTED ON DRAWINGS. PLACE SLAB BARS TO CLEAR SLEEVES AND MAINTAIN 1 1/2" CLEAR SPACING BETWEEN BARS. WHERE SLEEVES ARE CLOSELY SPACED IN A GROUP, THE GROUP SHALL BE TREATED AS AN OPENING AND REINFORCED ACCORDINGLY. WHERE FLOORS ARE PENETRATED BY OPENINGS, SEAL THE OPENINGS TO MAINTAIN THE INTEGRITY OF FIRE RATING.

REINFORCING STEEL

REINFORCING BARS SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. REINFORCING BAR MATS SHALL ALSO CONFORM TO ASTM A184. BARS SHALL BE BRANDED BY THE MANUFACTURER WITH BAR SIZE AND GRADE OF STEEL AND CERTIFIED MILL REPORTS SHALL BE SUBMITTED FOR RECORD. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.

PROVIDE CORNER BARS AT JUNCTIONS OF CONCRETE WALLS, GRADE BEAMS AND WALL FOOTINGS AND LAP WITH WALL REINFORCING AS SHOWN IN TYPICAL DETAILS.SIZE AND SPACING OF CORNER BARS TO BE SAME AS HORIZONTAL WALL REINFORCING, UNLESS SHOWN OTHERWISE. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AS NECESSARY.PROVIDE STANDARD HOOKS AT DISCONTINUOUS ENDS. TENSION AND COMPRESSION LAP SPLICES SHALL NOT BE LESS THAN THE SPLICE LENGTHS AS GIVEN IN ACI—318. GENERALLY LAP TOP BARS AT MID SPAN AND BOTTOM BARS AT SUPPORTS. PROVIDE PLACING ACCESSORIES IN ACCORDANCE WITH ACI RECOMMENDATIONS.

GREENBELT THEATER

GTMARCHITECTS

7735 OLD GEORGETOWN ROAD

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SUITE 700

BETHESDA, MD 20814

(240)333-2001 FAX

(240)333-2000

REVISIONS:

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BID SET 09/08/09

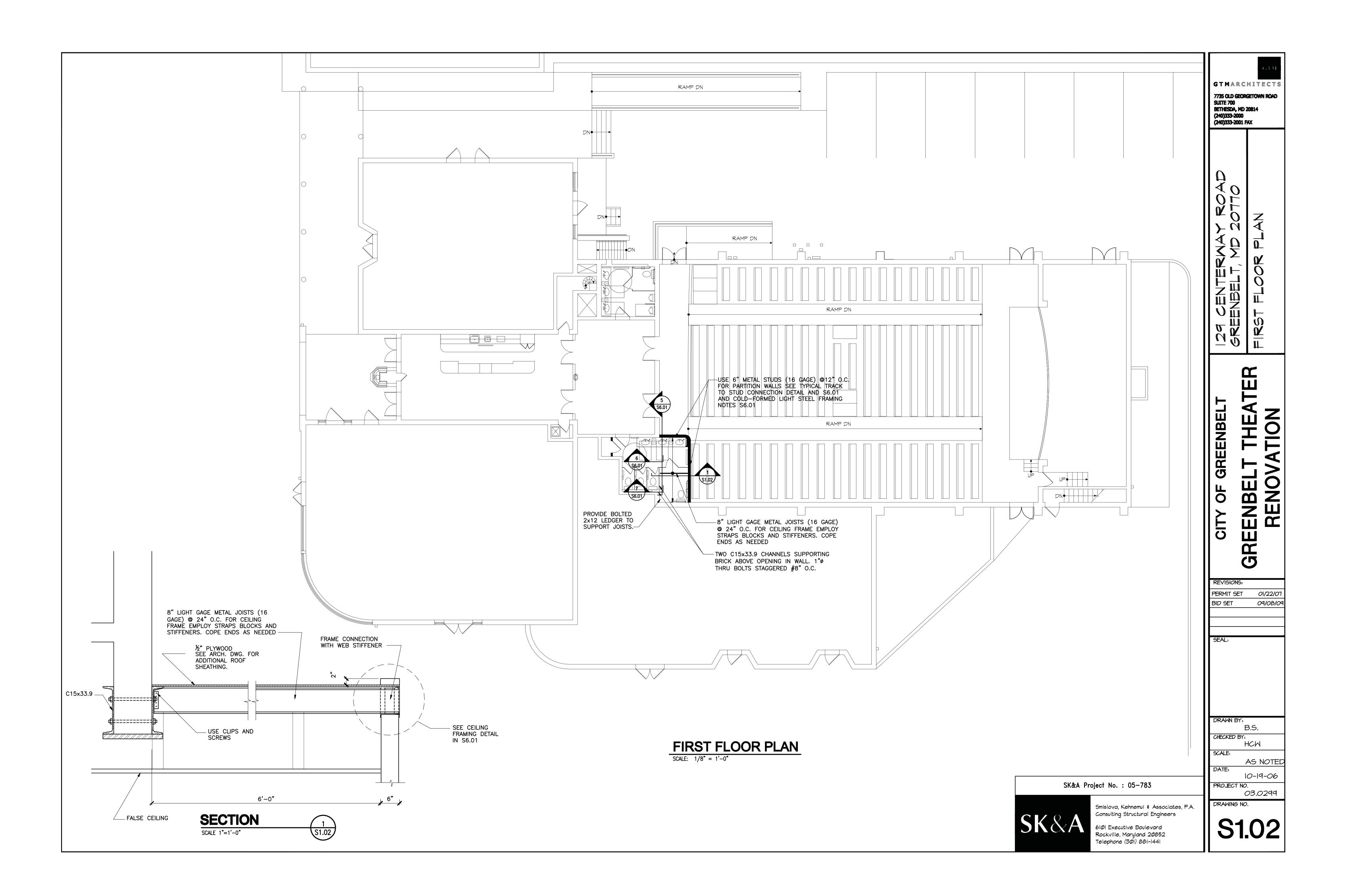
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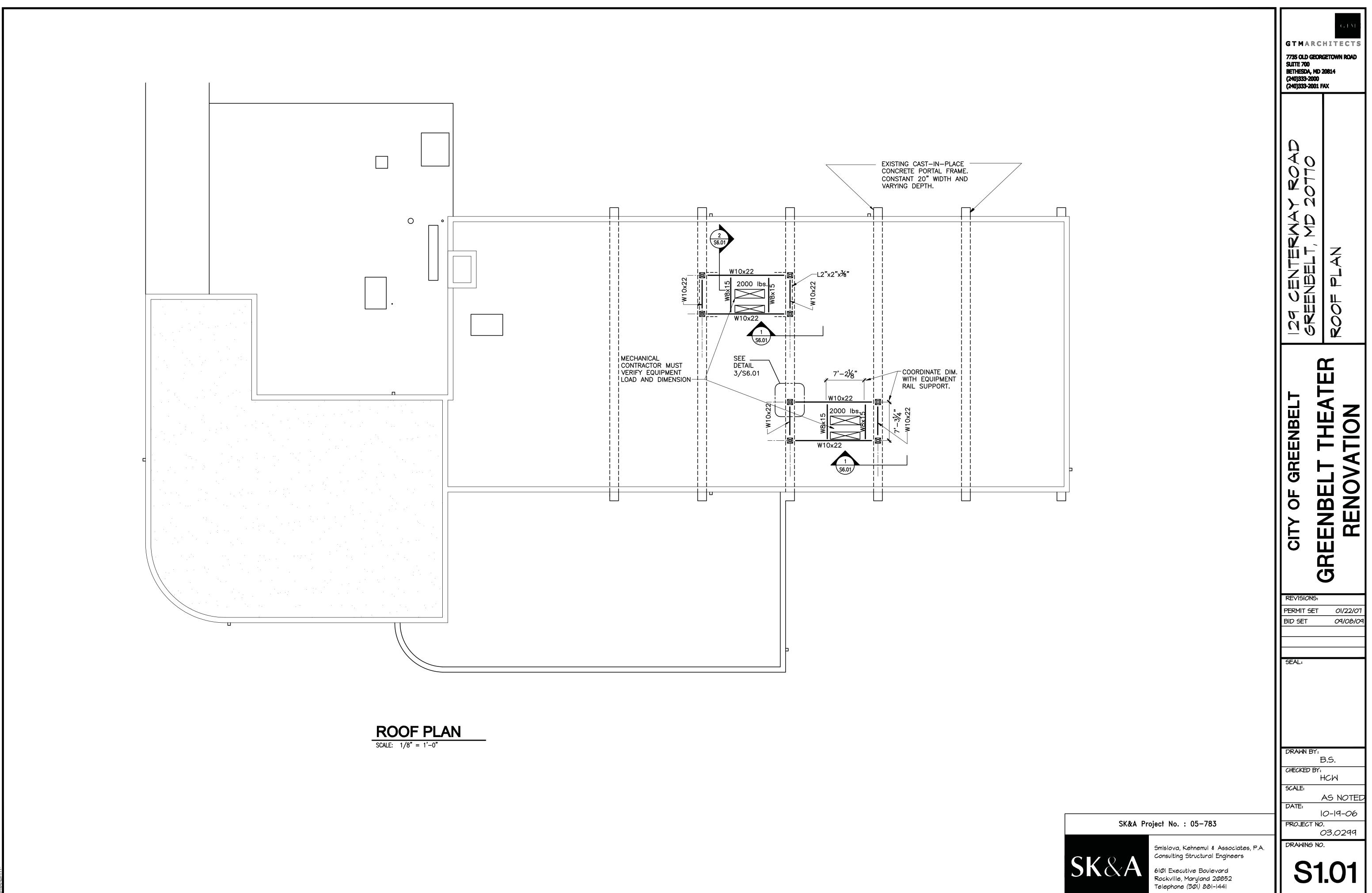
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CHECKED BY:
HCW
SCALE:
AS NOTED

10-19-06 PROJECT NO. 03.0299

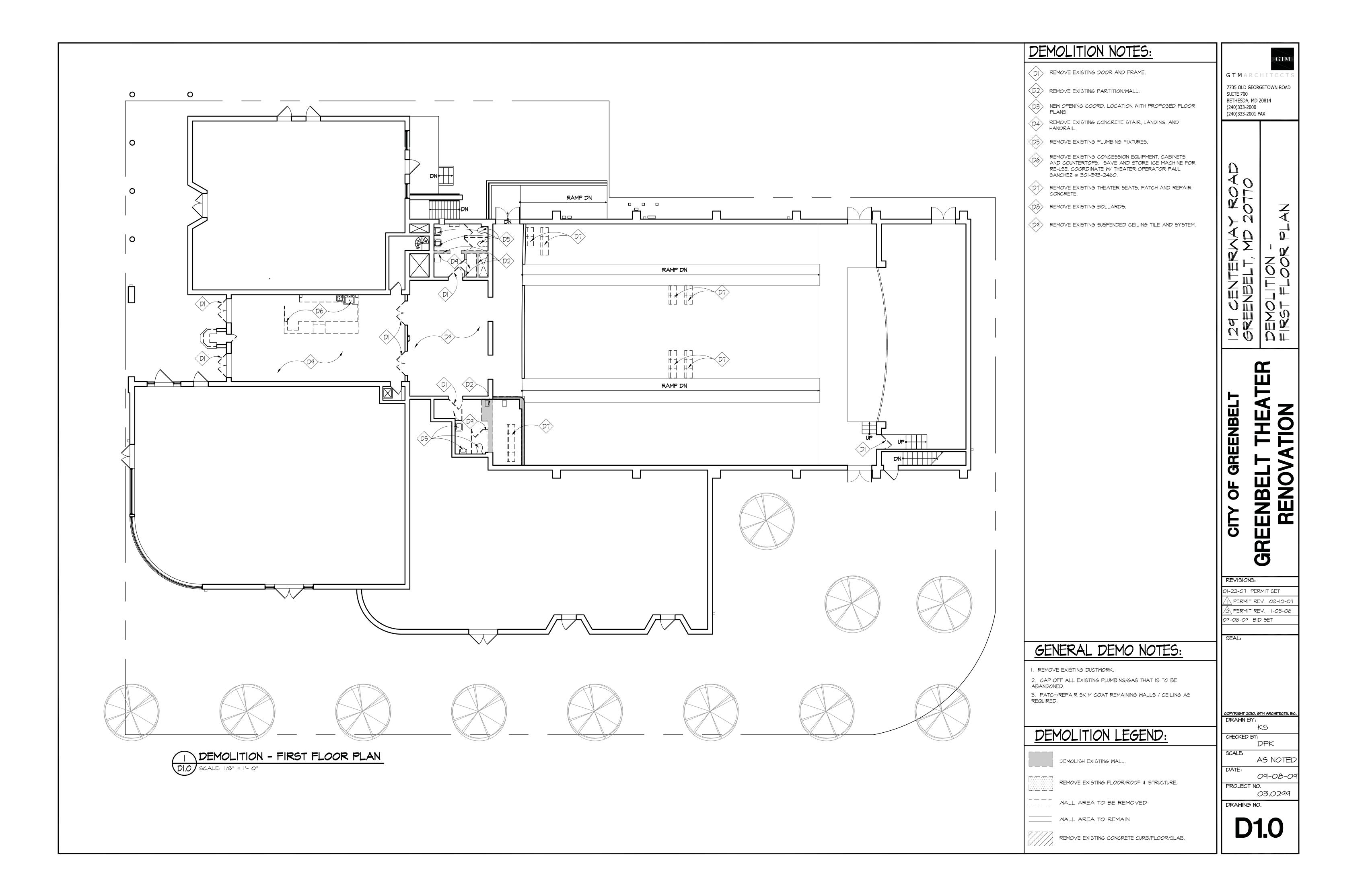
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GREENBELT THEATER RENOVATION

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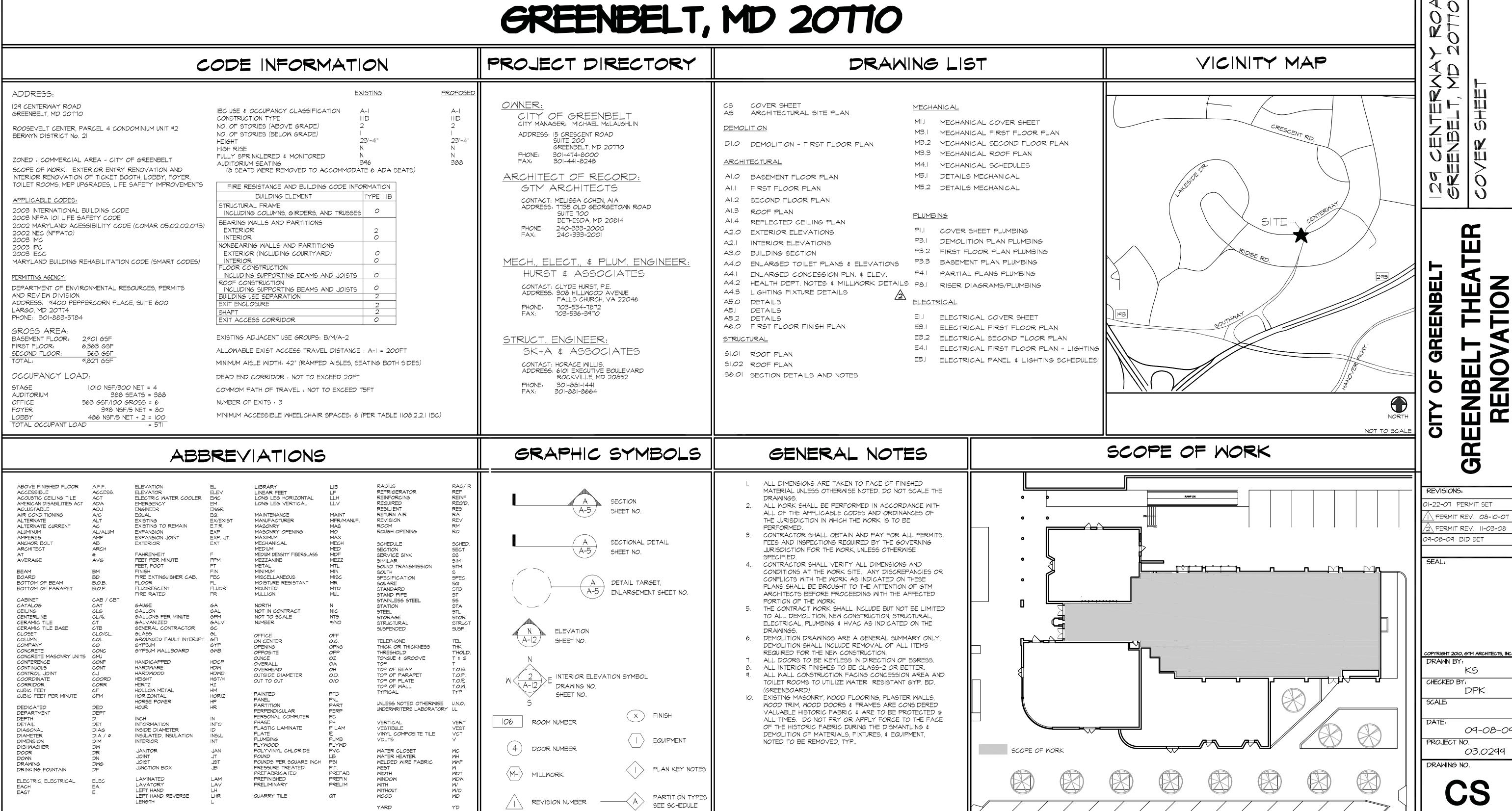
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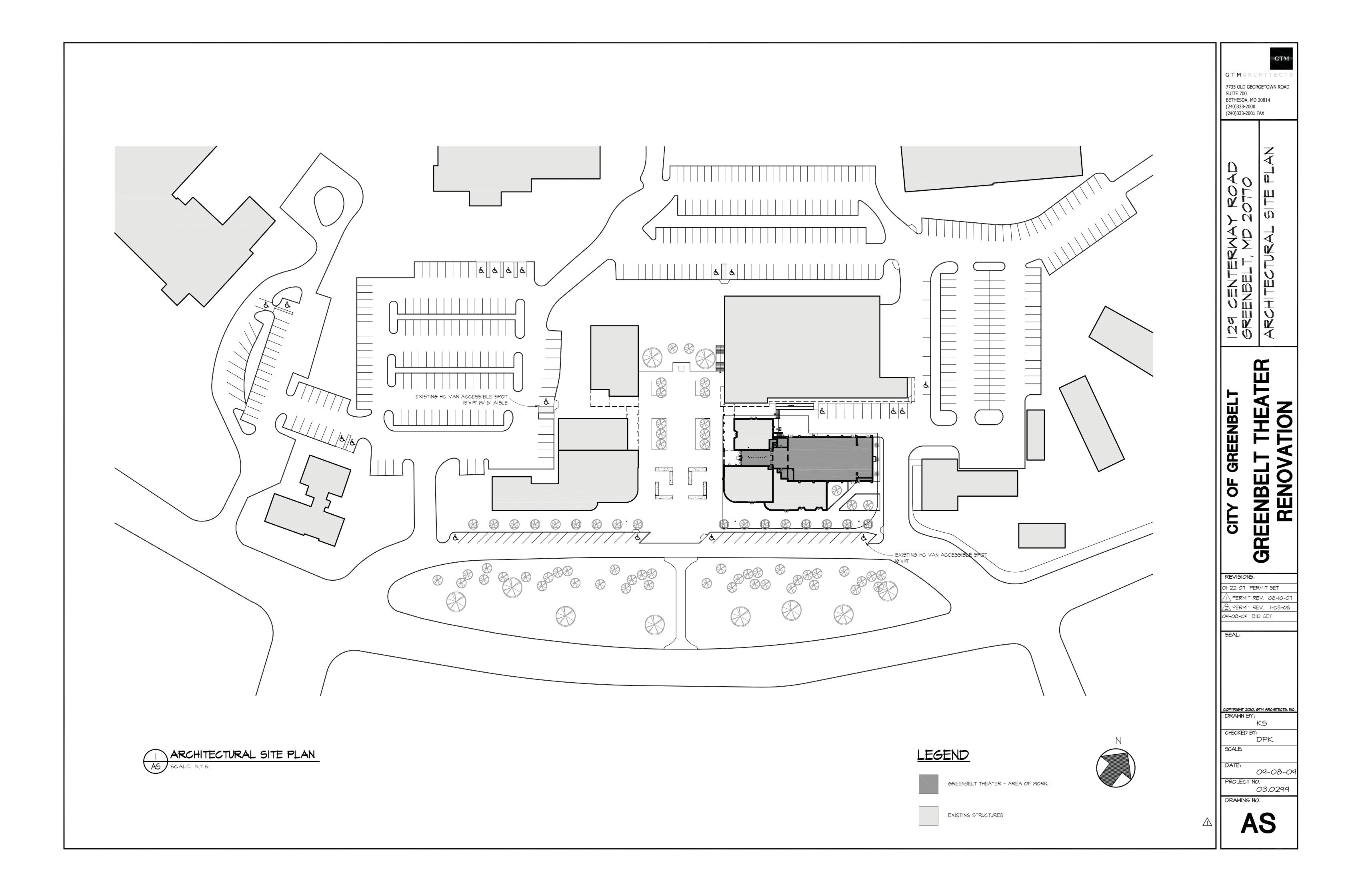
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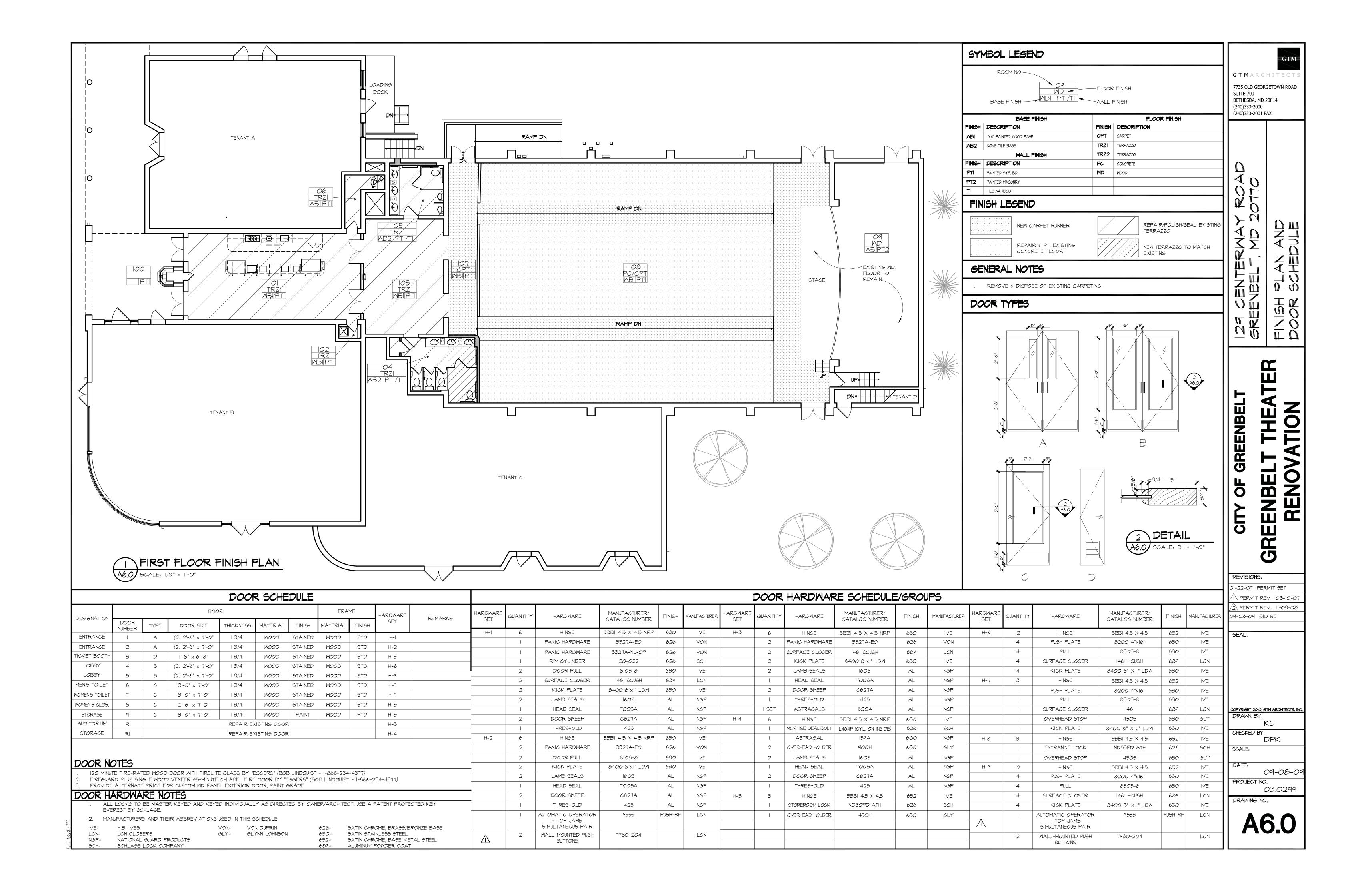
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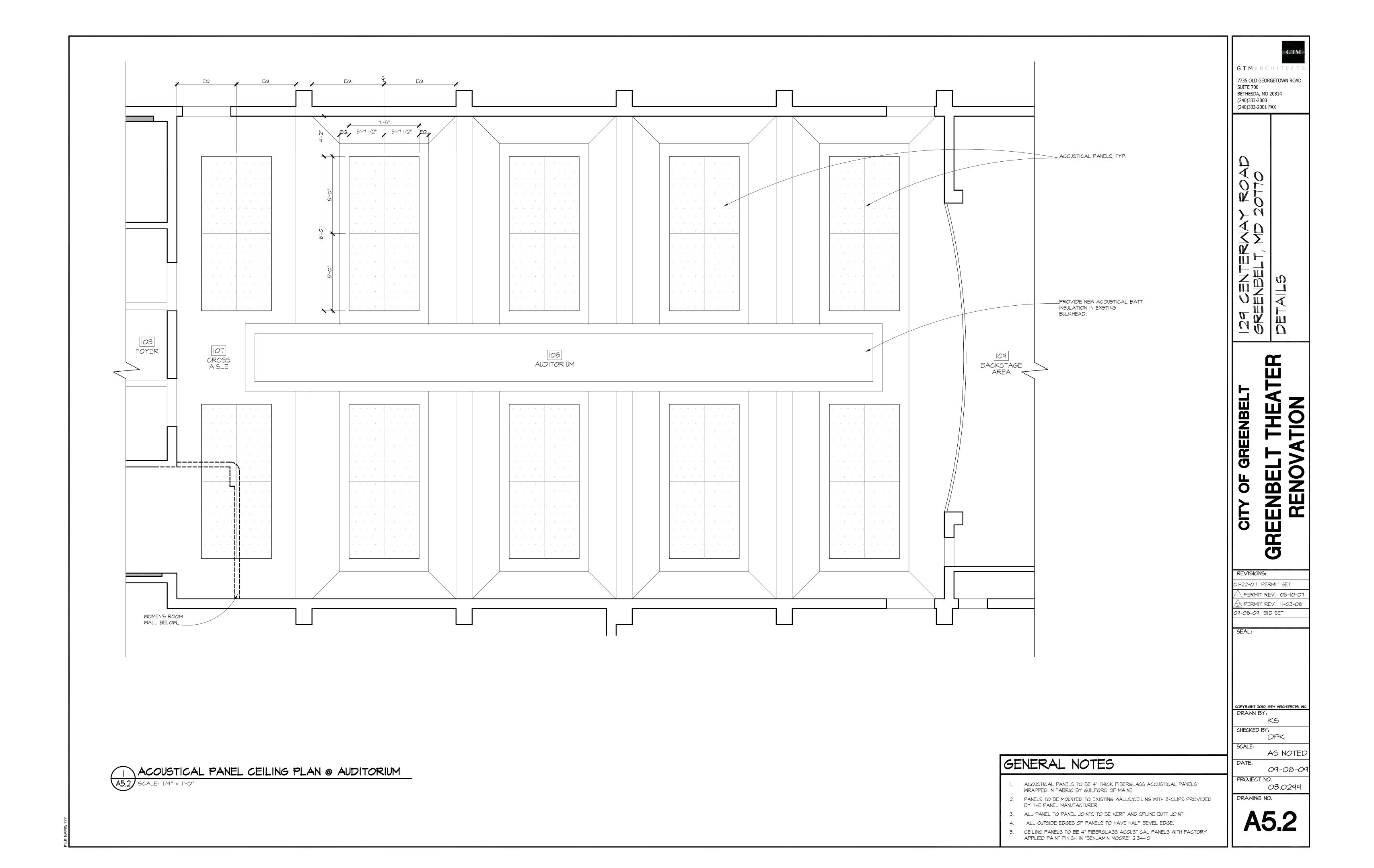
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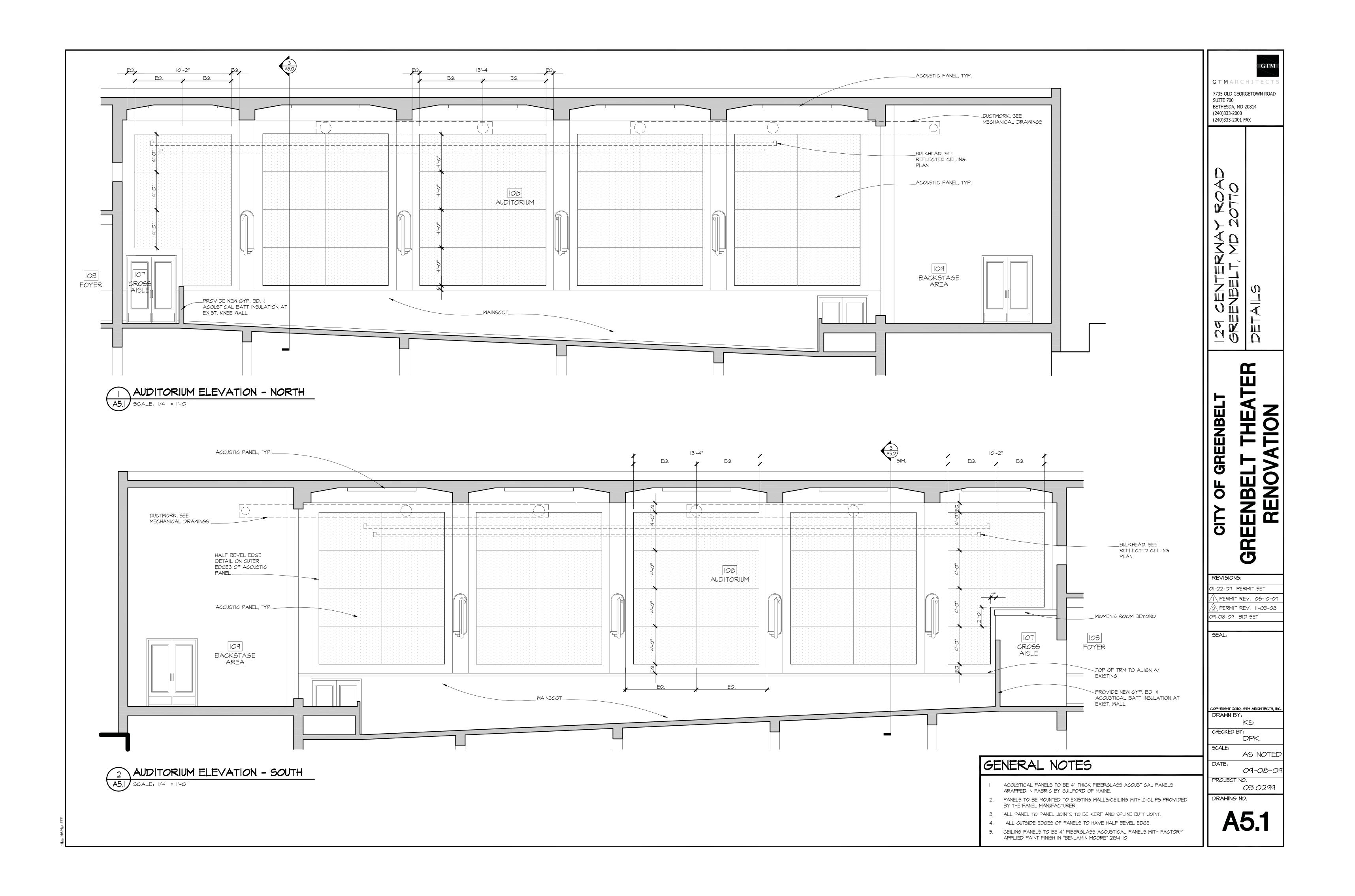
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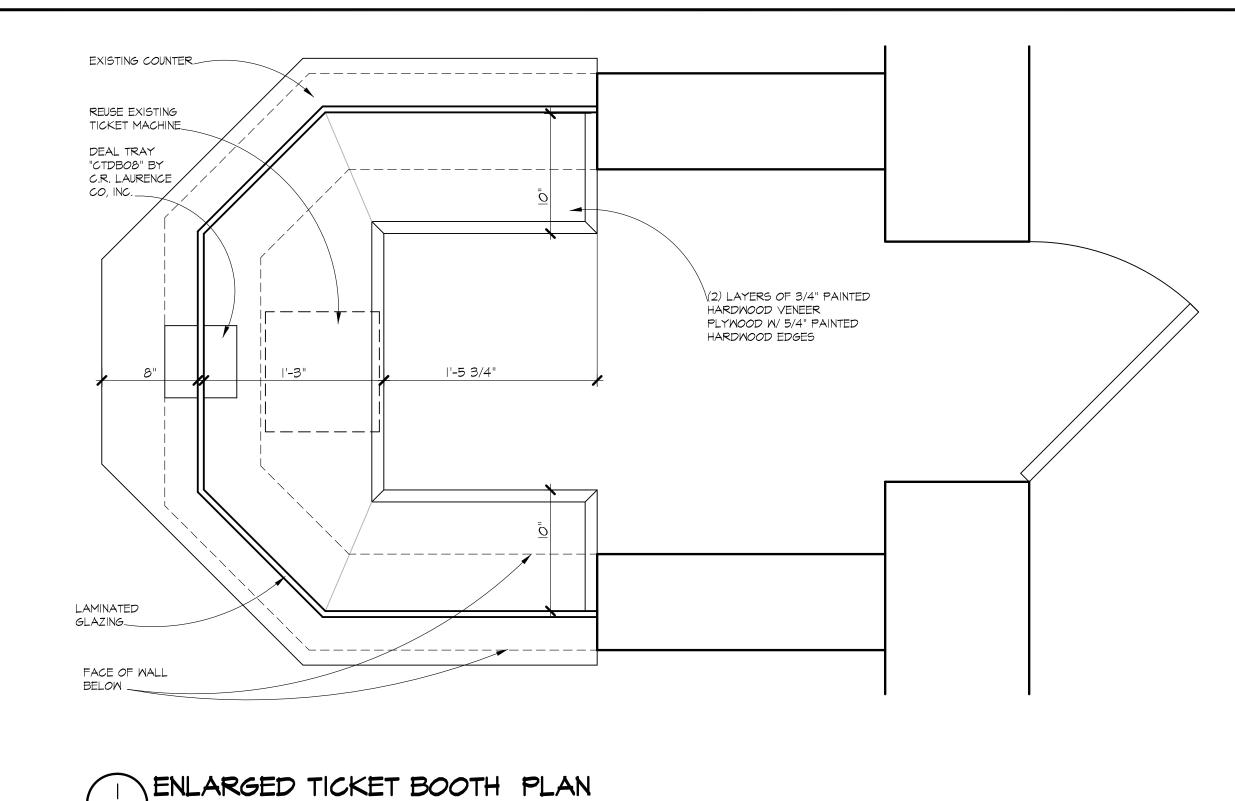




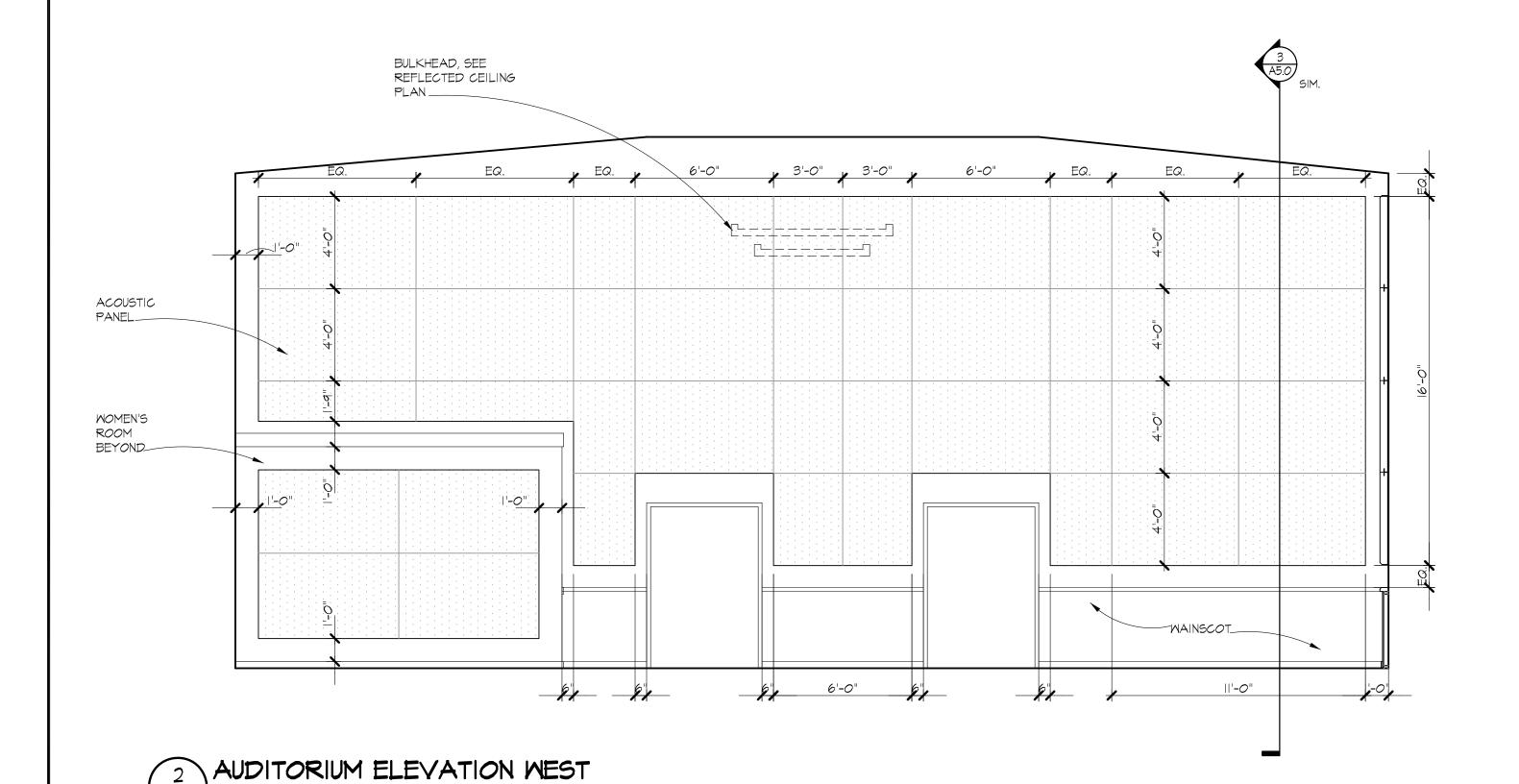


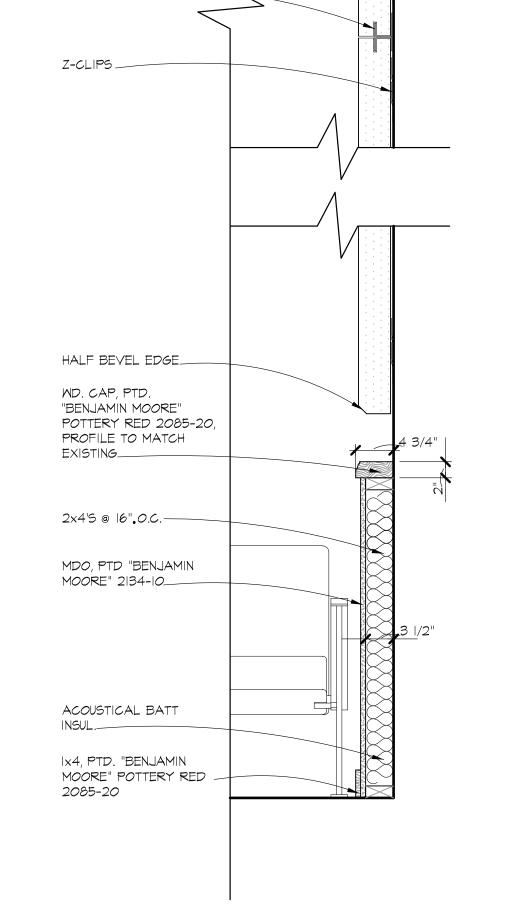






LAMINATED GLASS SHALL BE (2) LAYERS OF 3/16" HEAT STRENGTHENED CLEAR GLASS WITH A .030" POLYVINYL BUTRYAL INNER LAYER. RETAIN GLASS IN BRONZE ANODIZED "U" CHANNELS WITH ROLL IN GASKETS. (CR LAWRENCE CO. CRL 240) SEAL VERTICAL JOINTS WITH CLEAR SILICONE.





ACOUSTIC PANEL

KERF AND SPLINE BUTT

3 ACOUSTICAL PANEL DETAIL

ACOUSTICAL PANEL AREA CALCULATIONS

NORTH WALL - 990 SQ. FT. SOUTH WALL - 977 SQ. FT. MEST MALL -724 SQ. FT. CEILING -1,160 SQ. FT. TOTAL 3,851 SQ. FT.

GENERAL NOTES

- ACOUSTICAL PANELS TO BE 4" THICK FIBERGLASS ACOUSTICAL PANELS
- 2. PANELS TO BE MOUNTED TO EXISTING WALLS/CEILING WITH Z-CLIPS PROVIDED
- BY THE PANEL MANUFACTURER.

WRAPPED IN FABRIC BY GUILFORD OF MAINE.

- 3. ALL PANEL TO PANEL JOINTS TO BE KERF AND SPLINE BUTT JOINT.
- 4. ALL OUTSIDE EDGES OF PANELS TO HAVE HALF BEVEL EDGE.
- 5. CEILING PANELS TO BE 4" FIBERGLASS ACOUSTICAL PANELS WITH FACTORY APPLIED PAINT FINISH IN "BENJAMIN MOORE" 2134-10

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REENBEL GREENBELT RENOV

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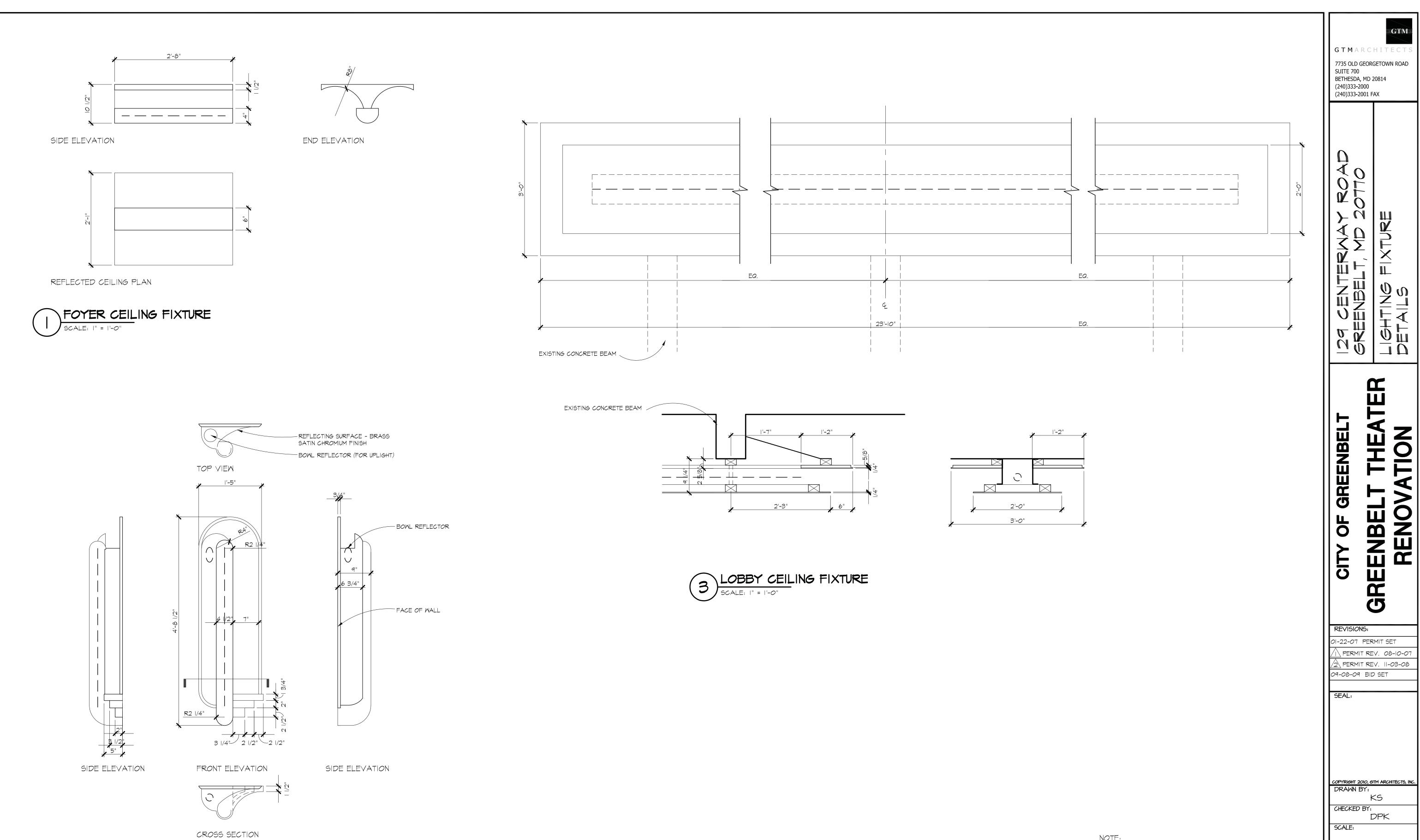
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KS CHECKED BY: DPK

SCALE: AS NOTED DATE: 09-08-09

PROJECT NO. 03.0299



AUDITORIUM WALL SCONCE

NOTE: 1. CONTACT JOHN COVENTRY (301) 657-4018 FOR INFORMATION ON CUSTOM LIGHTING.

A4.3

KS

DPK

09-08-09

03.0299

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PROJECT NO.

DRAWING NO.

SCALE:

DATE:

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GREENBELT THE/ RENOVATION

HEALTH DEPARTMENT GENERAL NOTES:

. ALL PIPING CONDUIT, BX CABLE, AND SIMILAR CONSTRUCTION WILL BE EITHER LOCATED INSIDE A WALL OR INSTALLED WITH A MINIMUM 3/4-INCH SPACE FROM THE WALL OR SEALED TO THE MALL.

2. ALL DOORS TO THE OUTSIDE WILL BE SELF-CLOSING AND RODENT PROOF. MALL DOORS MUST BE SOLID CONSTRUCTION DESIGN WITH NO GAPS GREATER THAN 1/4-INCH.

3. A MINIMUM OF 20 FOOTCANDLES OF SHIELDED LIGHT WILL BE PROVIDED AT ALL WORK SURFACES IN STORAGE AREAS, FOOD PREPARATION AREAS, UTENSIL-WASHING AREAS, TOILET ROOMS, LOCKER ROOMS, AND IN GARBAGE AND RUBBISH AREAS.

4. ALL RESTROOM DOORS WILL BE SELF-CLOSING.

5. ALL RESTROOMS WILL BE EQUIPPED WITH MECHANICAL EXHAUST VENTILATION SIZED AT A MINIMUM RATE OF 2 CUBIC FEET PER MINUTE PER SQUARE FOOT OF FLOOR AREA AND EXHAUSTING DIRECTLY TO THE OUTSIDE.

6. ALL FLOOR-MOUNTED EQUIPMENT WILL BE PLACED ON NSF INTERNATIONAL (NSF) APPROVED 6-INCH LEGS, OR THE EQUIVALENT, AND PROPERLY SPACED FROM ADJACENT EQUIPMENT OR WALLS; OR PLACED ON NSF APPROVED CASTERS, OR THE EQUIVALENT; OR PROPERLY SEALED TO ALL ADJACENT SURFACES.

7. ALL COUNTER-MOUNTED FOOD SERVICE EQUIPMENT WEIGHING IN EXCESS OF 80 POUNDS WILL BE MOUNTED ON NSF APPROVED 4-INCH LEGS.

8. ALL EXPOSED RAW WOOD WILL BE SEALED/PAINTED.

9. ALL ANNULAR OPENINGS IN CONSTRUCTION WILL BE SEALED/CAULKED TO WITHIN 1/32 OF AN INCH.

10. ALL EXHAUST HOODS OVER COOKING EQUIPMENT WILL BE CAPABLE OF CAPTURING AND EXHAUSTING SMOKE GENERATED FROM A 60-SECOND SMOKE BOMB.

II. THE OUTSIDE STORAGE OF REFUSE AND GREASE WILL BE IN RODENT-PROOF CONTAINERS LOCATED ON A PAVED SURFACE.

12. ALL SINK INSTALLATIONS WILL BE EQUIPPED WITH HOT AND COLD RUNNING WATER THROUGH A MIXING VALVE OR COMBINATION FAUCET.

13. ALL PAINTING WILL BE WITH LEAD-FREE, NON-METALLIC, EASILY CLEANABLE PAINT OR A HIGH QUALITY VARNISH.

14. WASTEWATER FROM ALL APPLICABLE FOOD SERVICE EQUIPMENT WILL BE INDIVIDUALLY

SEALANT NOTES - THE USE OF SEALANTS ON FOOD SERVICE EQUIPMENT:

I. ALL SEALANTS MUST BE LISTED AS APPROVED BY NSF INTERNATIONAL (NSF) UNDER STANDARD 51. 2. SEALANTS SHALL BE USED ONLY IN STRUCTURALLY SOUND JOINTS AND SEAMS.

3. SEALANTS MAY BE USED TO FILL SPACES AND OPENINGS SUCH AS, BUT NOT LIMITED TO, BLIND RIVET HEADS AND SLOT AND PHILLIPS HEAD SCREWS.

4. OPENINGS AROUND SERVICE AND UTILITY LINES SHOULD BE CLOSED INSOFAR AS PRACTICAL BY: A) COLLARS OR GROMMETS B) FLEXIBLE FORM GASKETS.

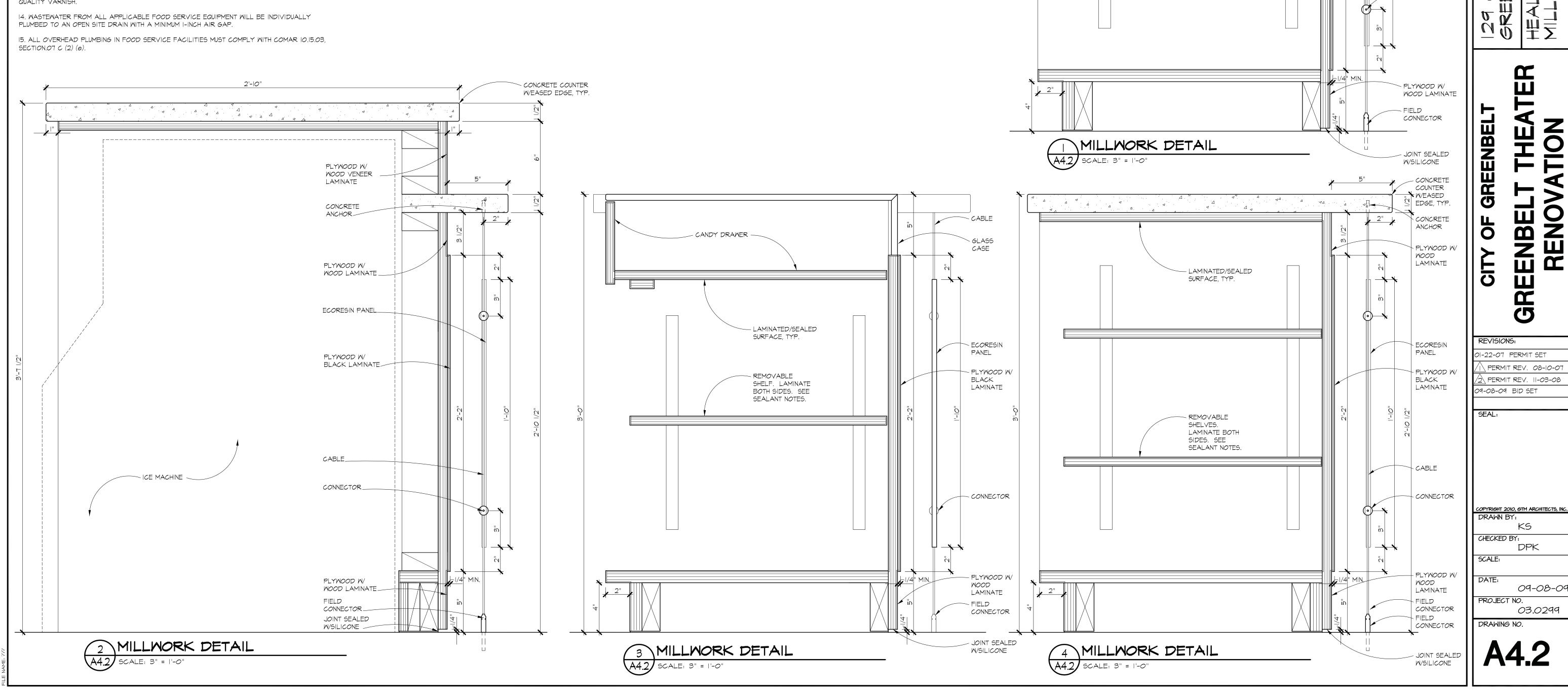
SEALANTS MAY BE USED TO SEAL SERVICE AND UTILITY LINES TO WALLS OR ADJACENT PIECES OF EQUIPMENT WHERE THE SPACING IS CLOSED TO LESS THAN 1/8-INCH.

SEALANTS MAY NOT BE UTILIZED IN FOOD AND SPLASH CONTACT SURFACES TO FILL OPEN SPACES OR VOIDS THAT RESULT DUE TO IMPROPER DESIGN OR FABRICATION. ANY OPENING IN EXCESS OF 1/8-INCH SHALL BE CONSIDERED EXCESSIVE AND MUST BE CLOSED USING PROPER FIELD JOINTS.

PROPOSED MENU

CONCESSION WILL SERVE:

SODA FOUNTAIN BEVERAGES BOTTLED WATER POPCORN WITH BUTTER PRE-PACKAGED CANDY



CONCRETE

EDGE, TYP.

CONCRETE

PLYWOOD W/

WOOD LAMINATE

- ECORESIN PANEL

PLYWOOD W/

~ CABLE

CONNECTOR

BLACK LAMINATE

ANCHOR

LAMINATED/SEALED

SURFACE, TYP.

REMOVABLE

SHELF. LAMINATE

BOTH SIDES. SEE

SEALANT NOTES.

- CASH DRAWER

COUNTER W/EASED

GTM

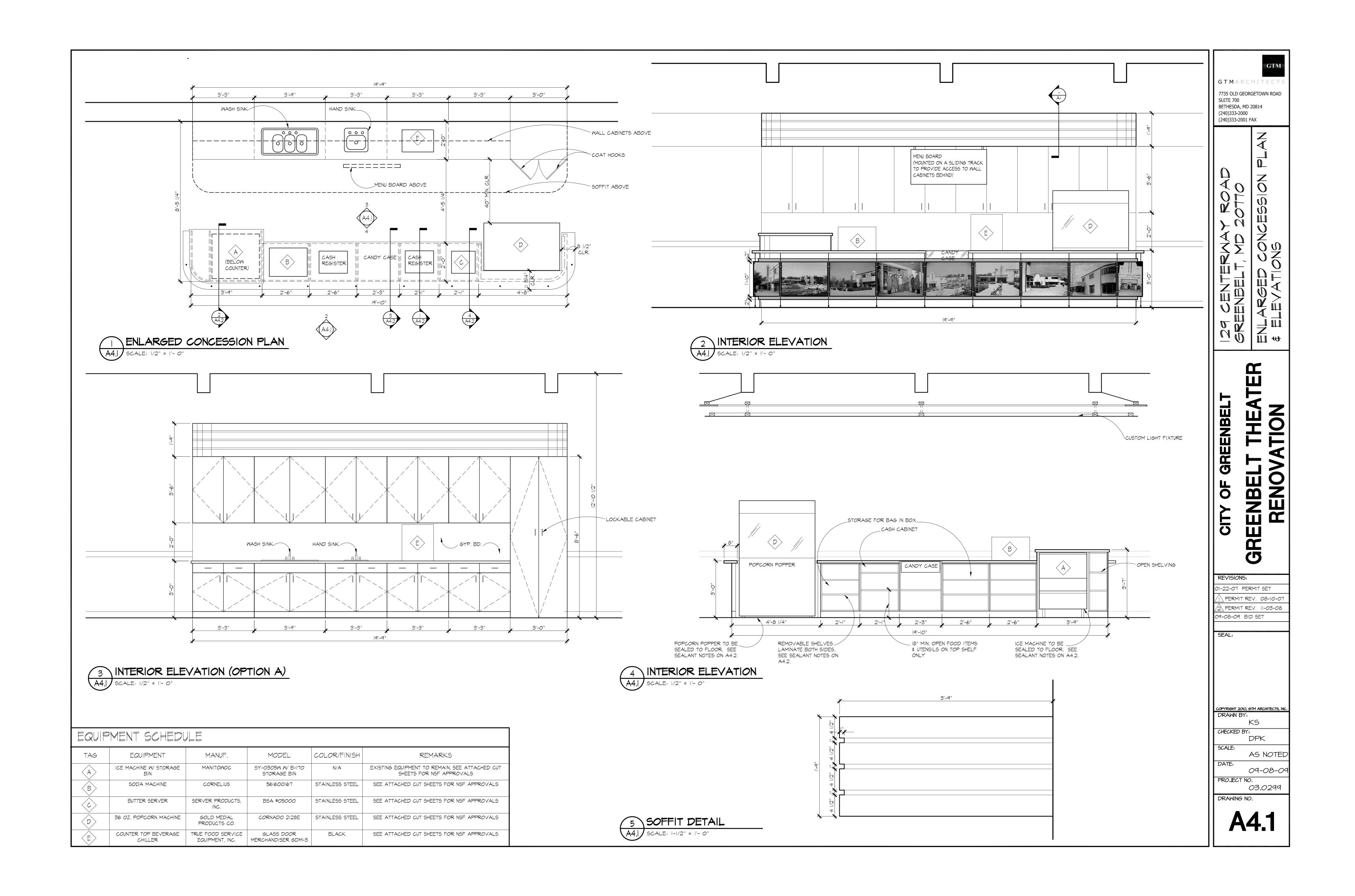
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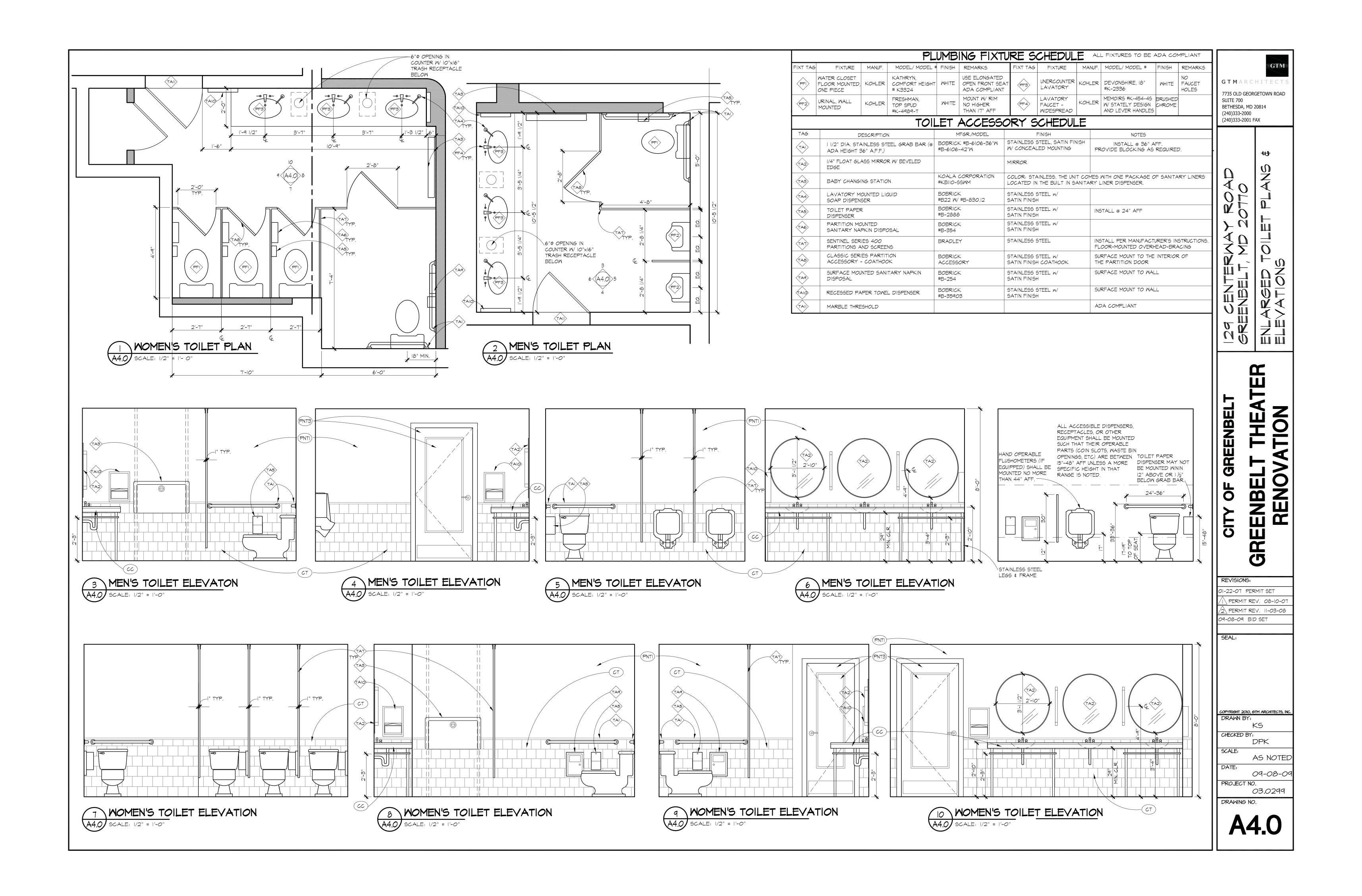
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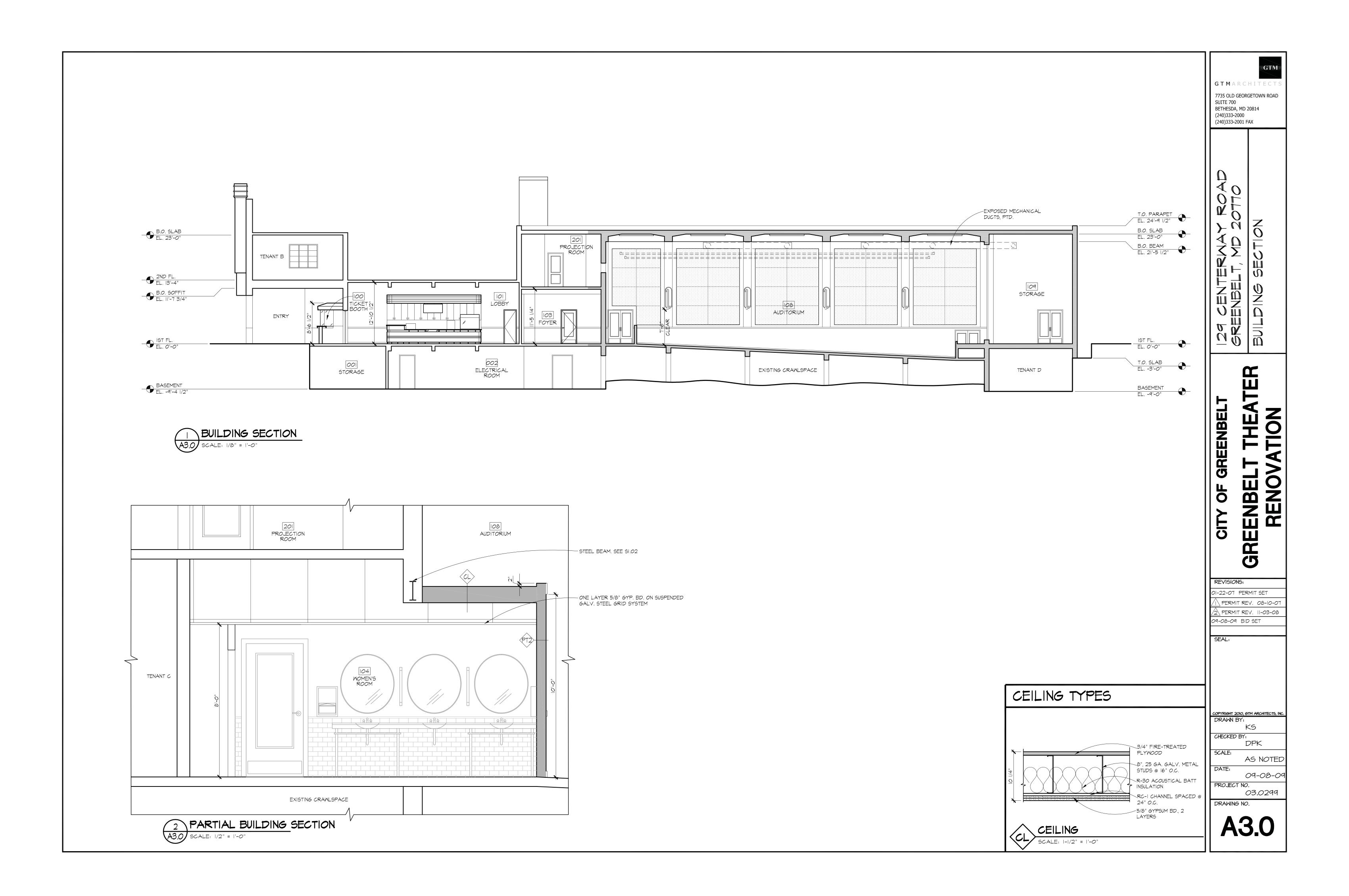
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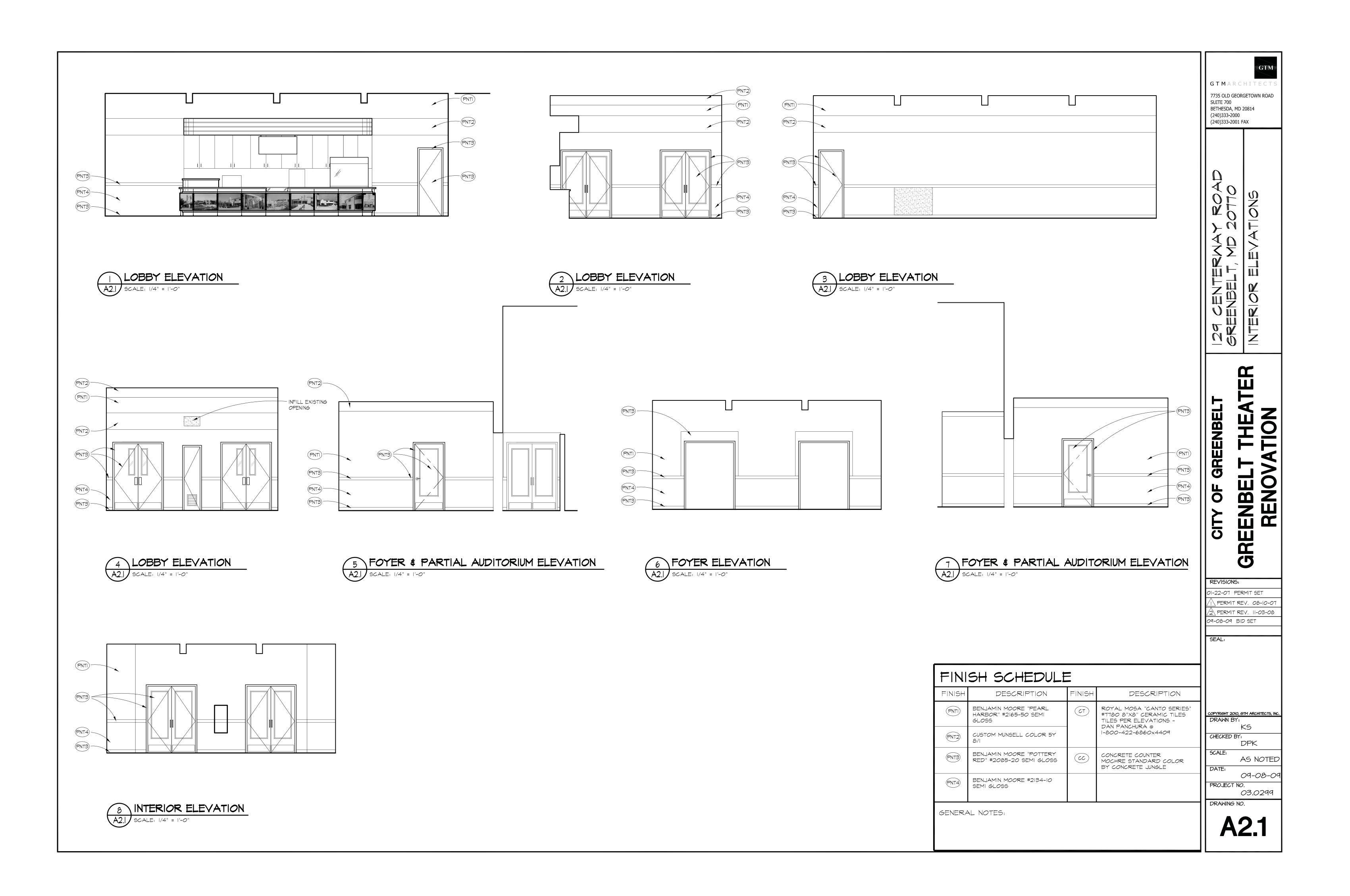
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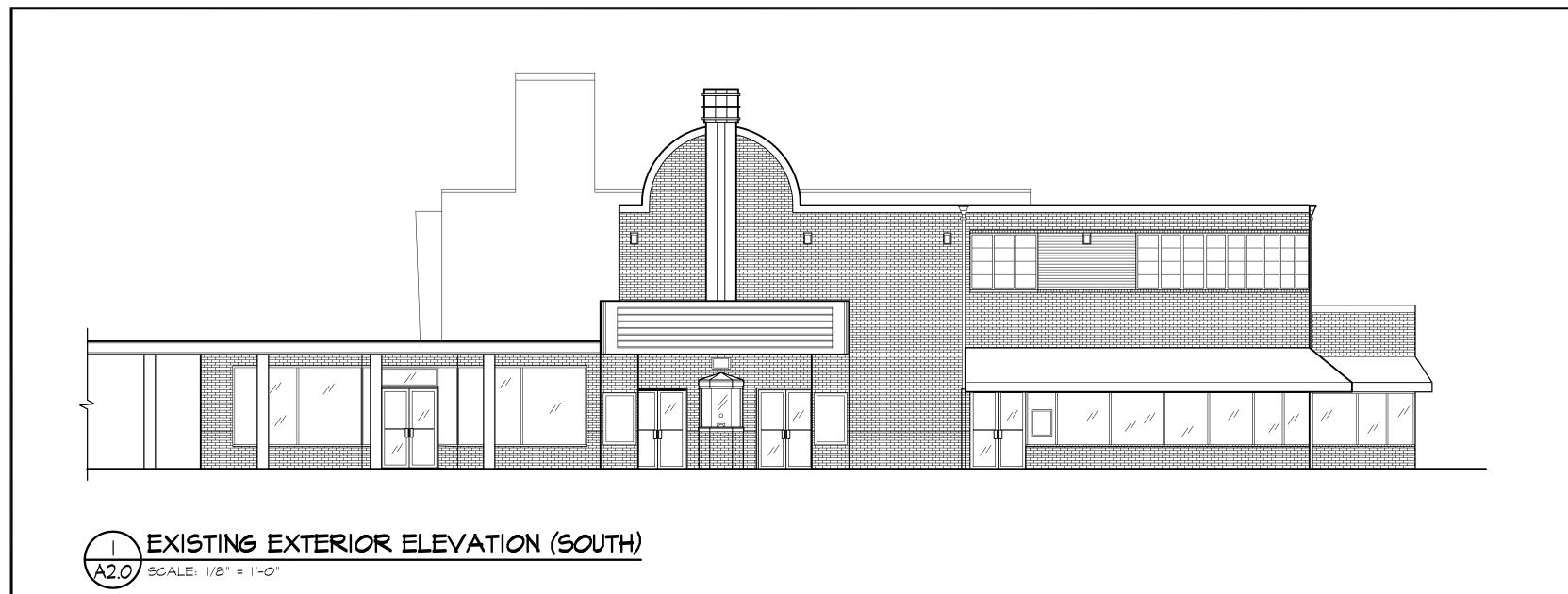
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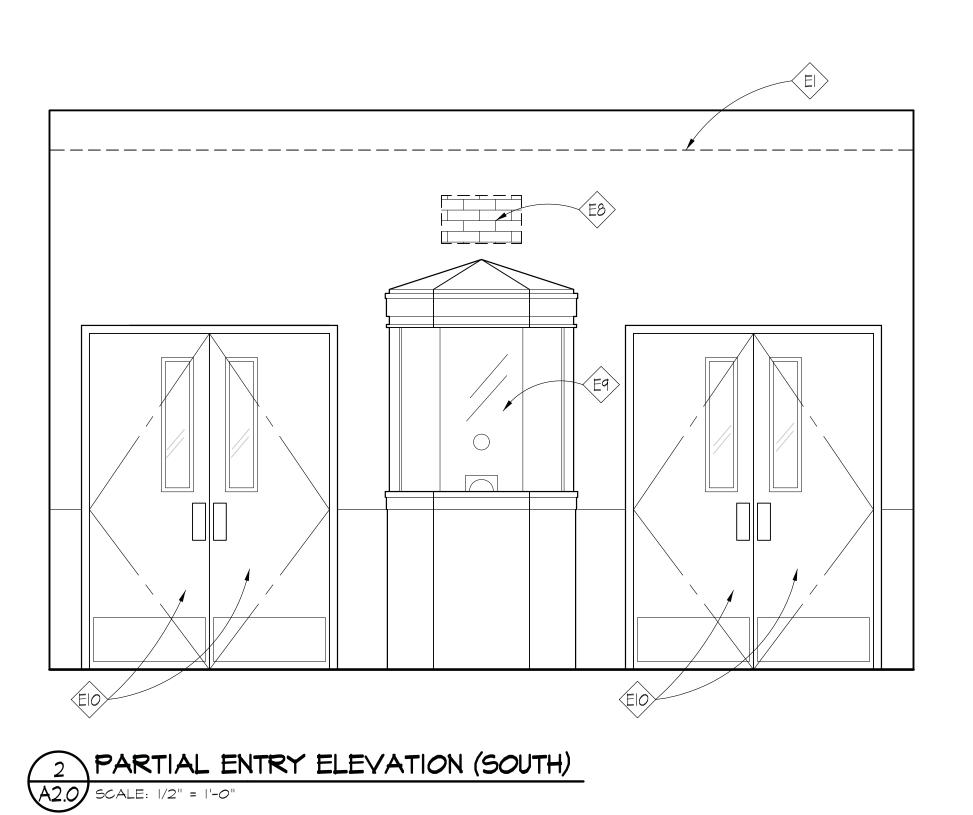


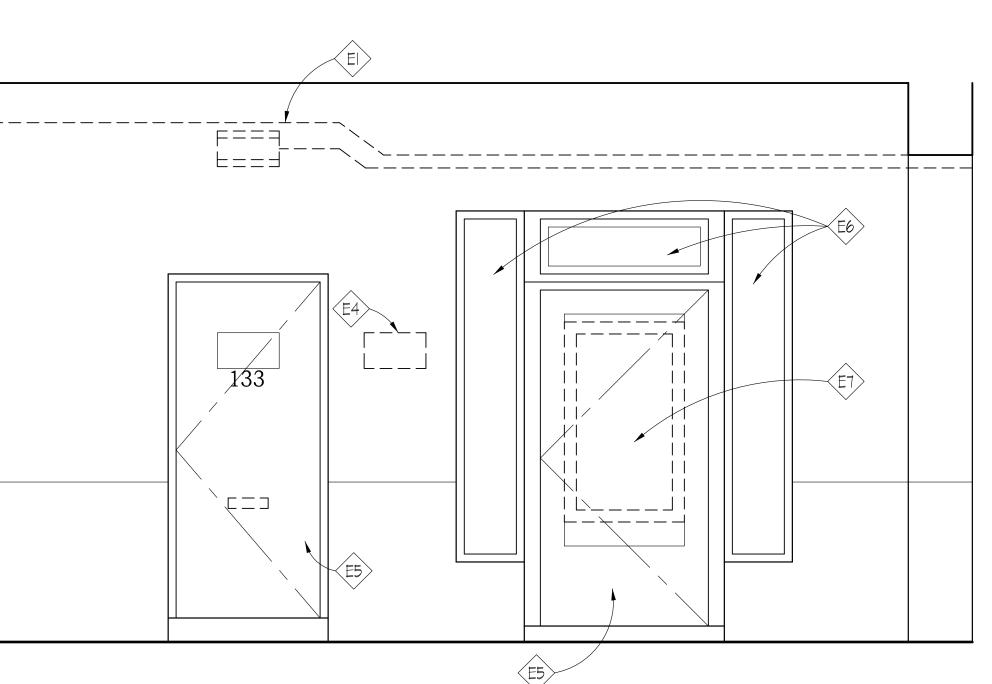












3 PARTIAL ENTRY ELEVATION (EAST)
A2.0 SCALE: 1/2" = 1'-0"

ELEVATION NOTES

- REMOVE EXISTING LIGHT FIXTURE AND CONDUIT. REQUEST PERMISSION FROM LANDLORD BEFORE REMOVING.
- E2 EXISTING SIGN TO REMAIN.
- CHROME ADDRESS NUMBERS.
- E4 REMOVE EXISTING ADDRESS PLATE.
- ES EXISTING DOOR TO REMAIN.
- FROSTED GLASS TO MATCH EXISTING.
- REMOVE EXISTING SIGN BOX AND REPLACE WITH FROSTED GLASS.
- REMOVE EXISTING AIR CONDITIONING UNIT, INFILL WITH BRICK TO MATCH EXISTING. PAINT TO MATCH EXISTING.
- REMOVE EXISTING PLEXI-GLASS AND REPLACE WITH GLAZING SYSTEM. SEE DWG. A5.0
- REMOVE EXISTING STOREFRONT DOORS AND REPLACE WITH MOOD DOORS.

ATER OF GREENBELT VATION GREENBEL

GTM

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09-08-09 BID SET

DRAWN BY: KS

CHECKED BY:

SCALE:

DATE:

GENERAL NOTES

- I. ALL MATERIALS TO BE NEW UNLESS NOTED "SALVAGED" OR "EXISTING."
- ALTERNATE: REPLACE MAIL SLOT, LOCK, AND HARDWARE, RELOCATE CLOSER, TO BE SELECTED BY ARCHITECT.

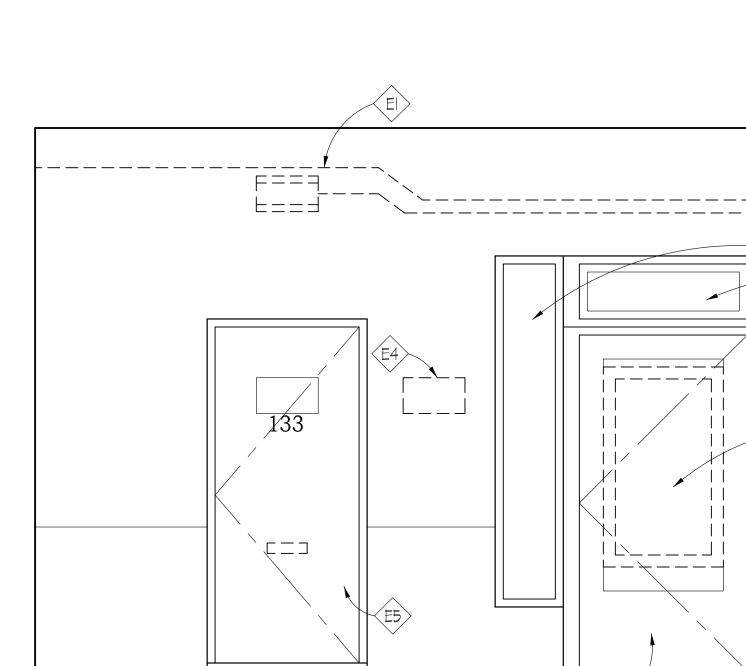
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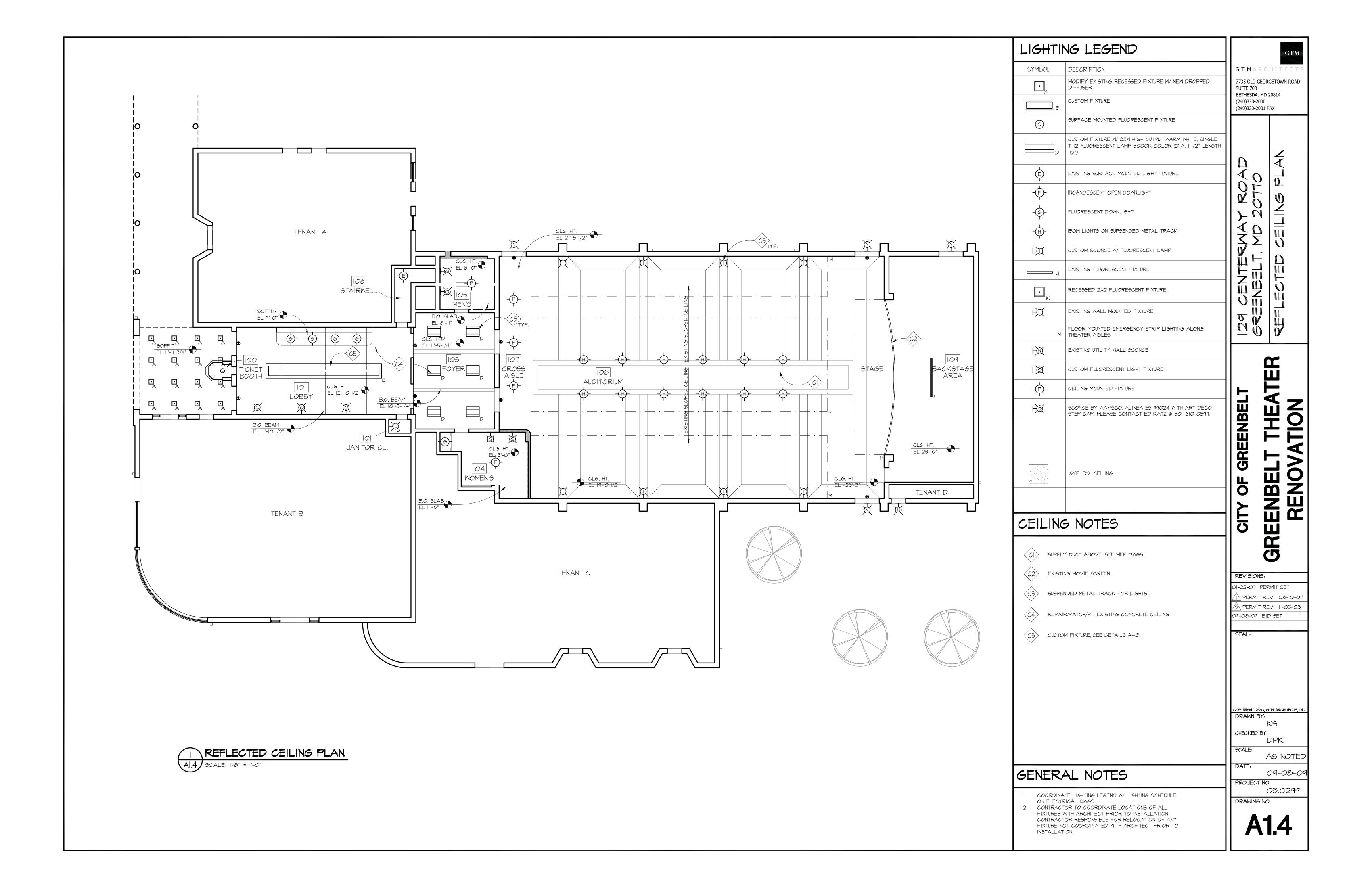
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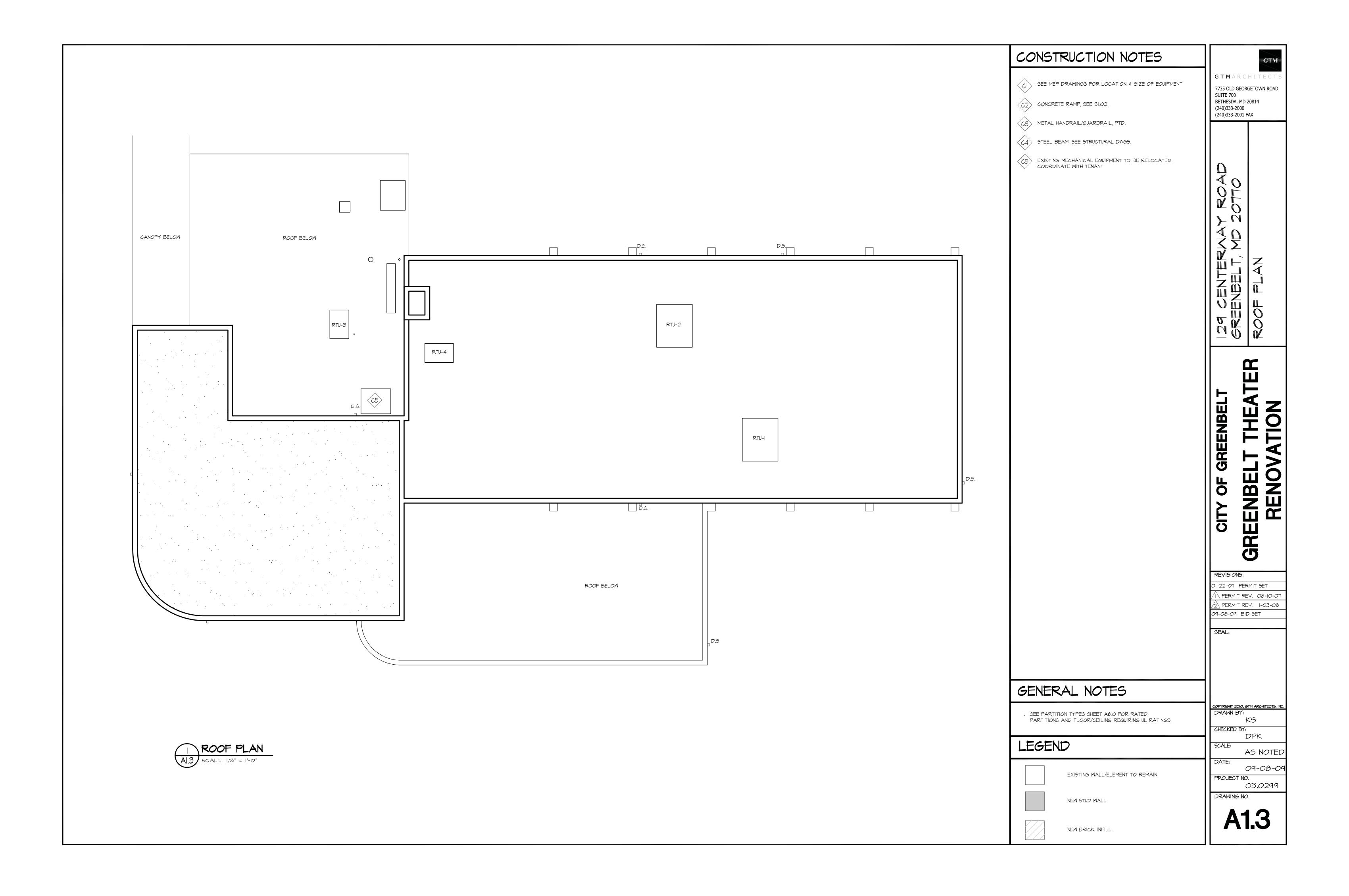
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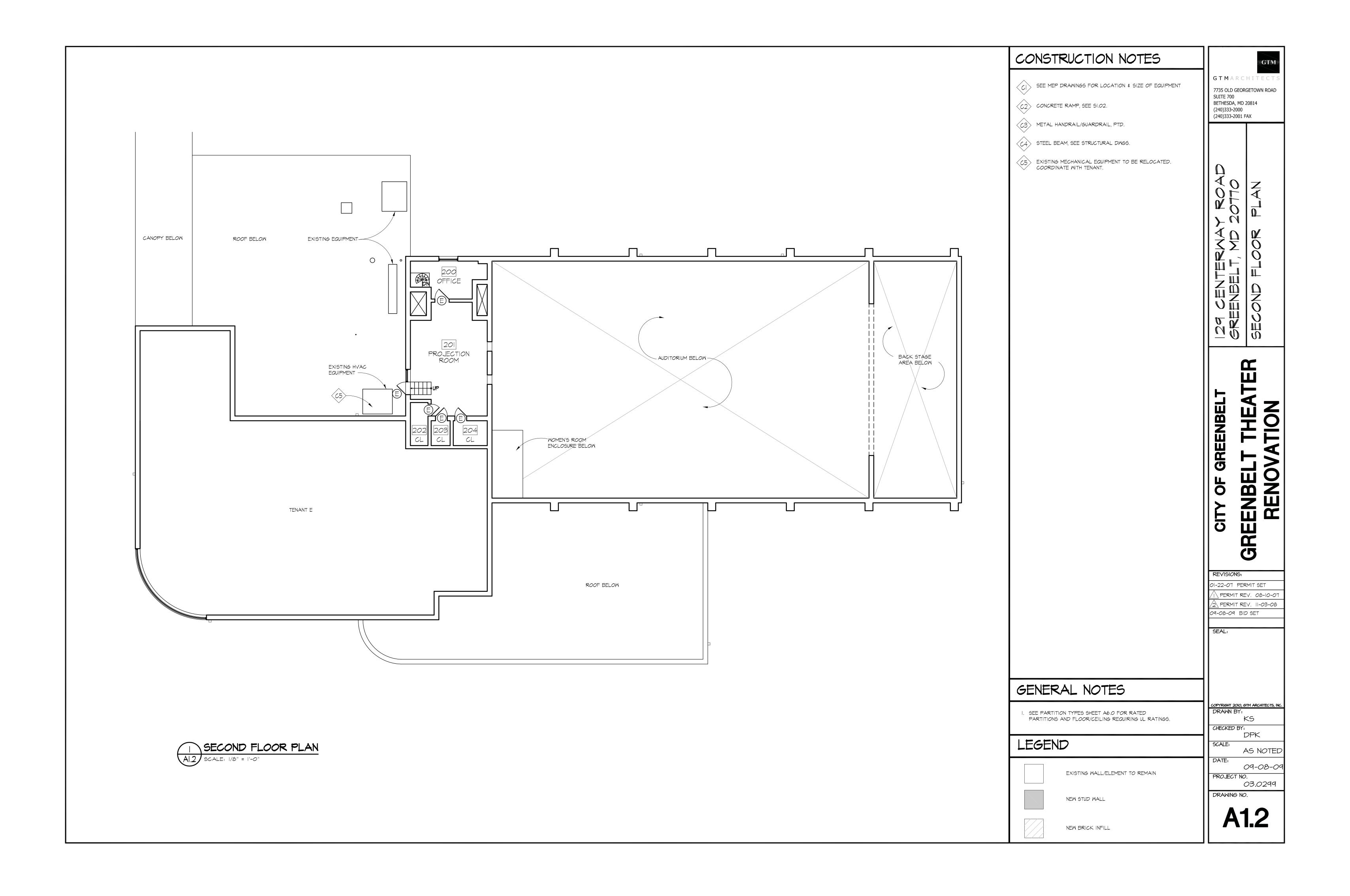
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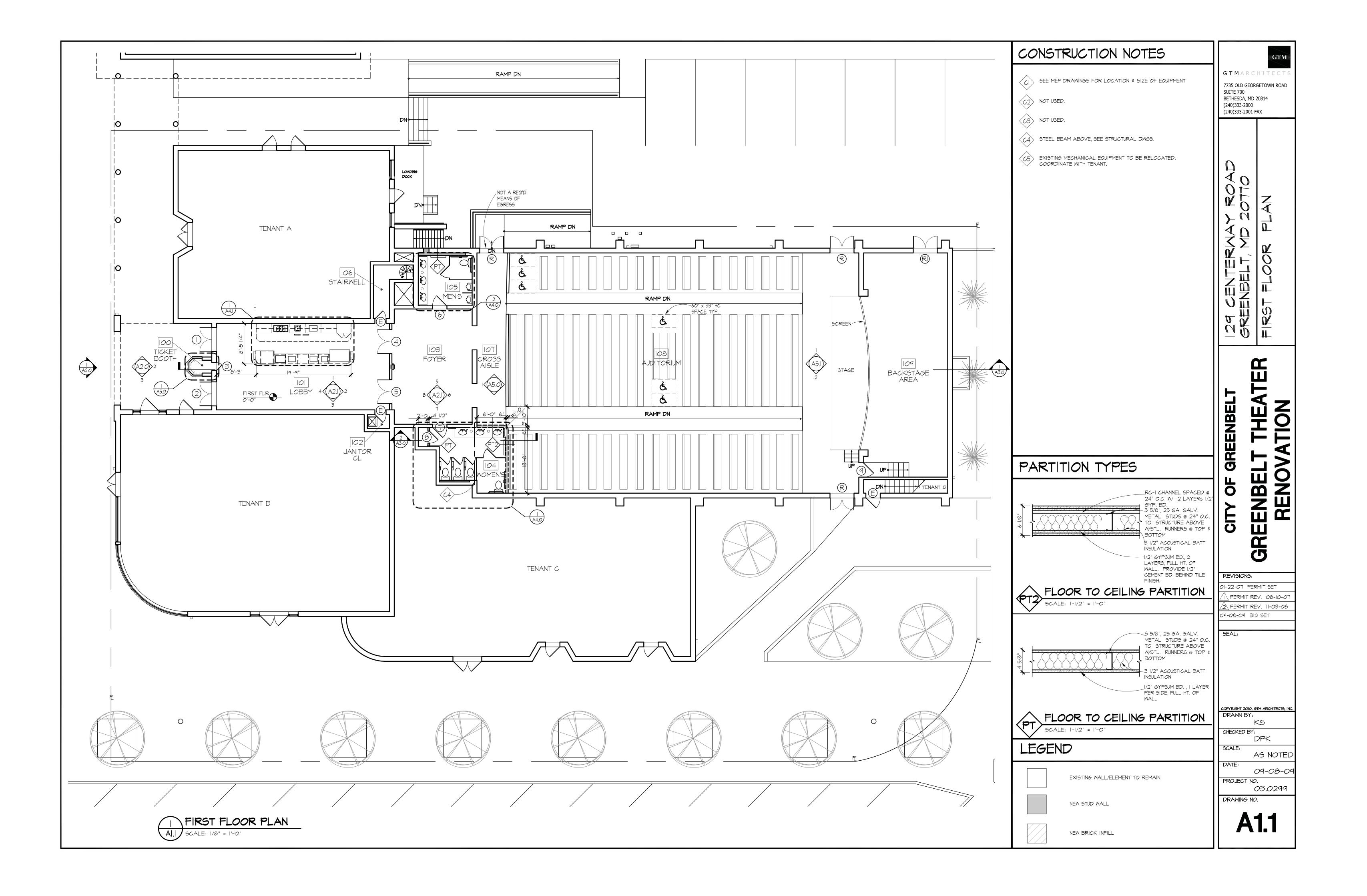
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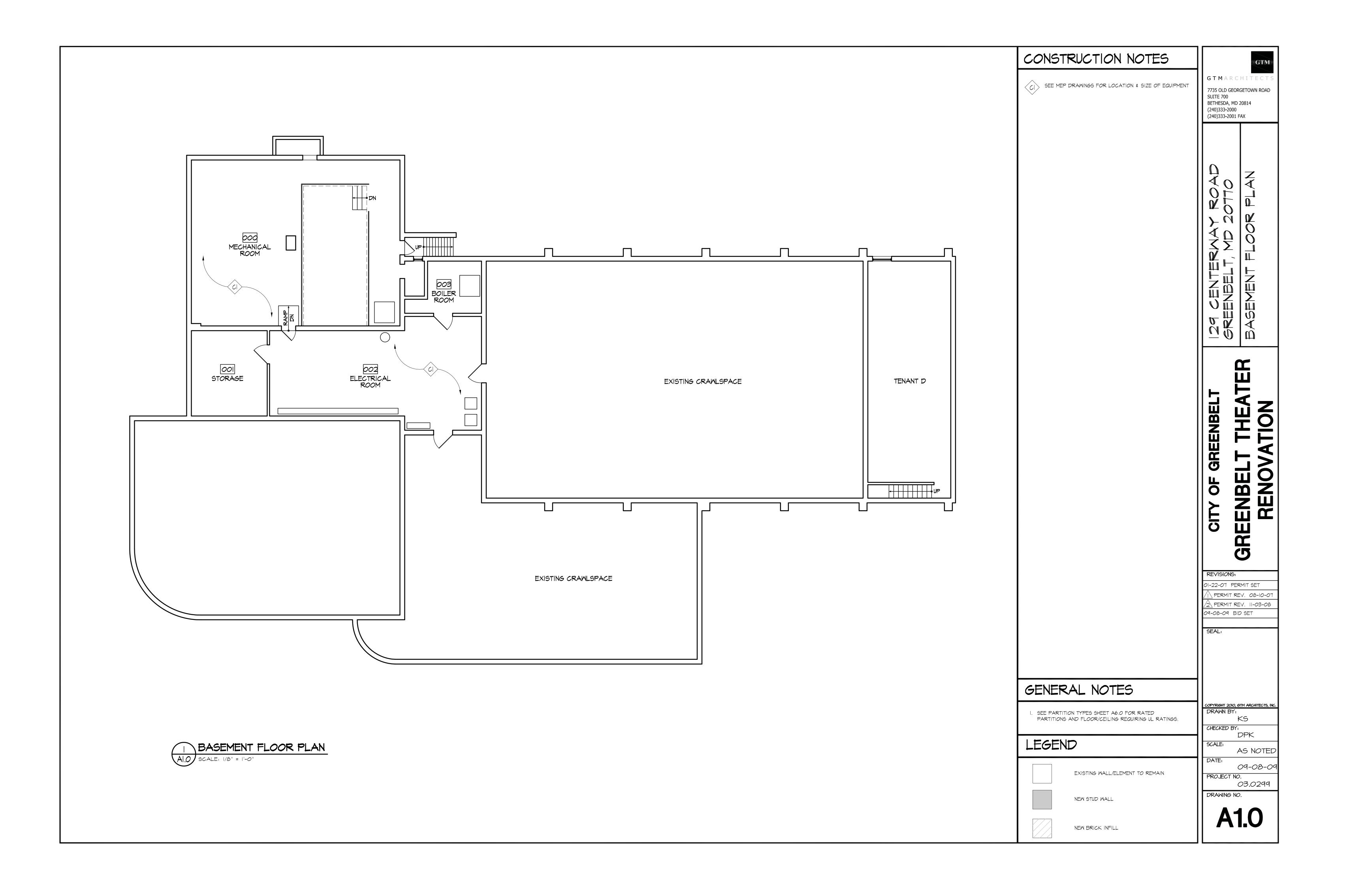


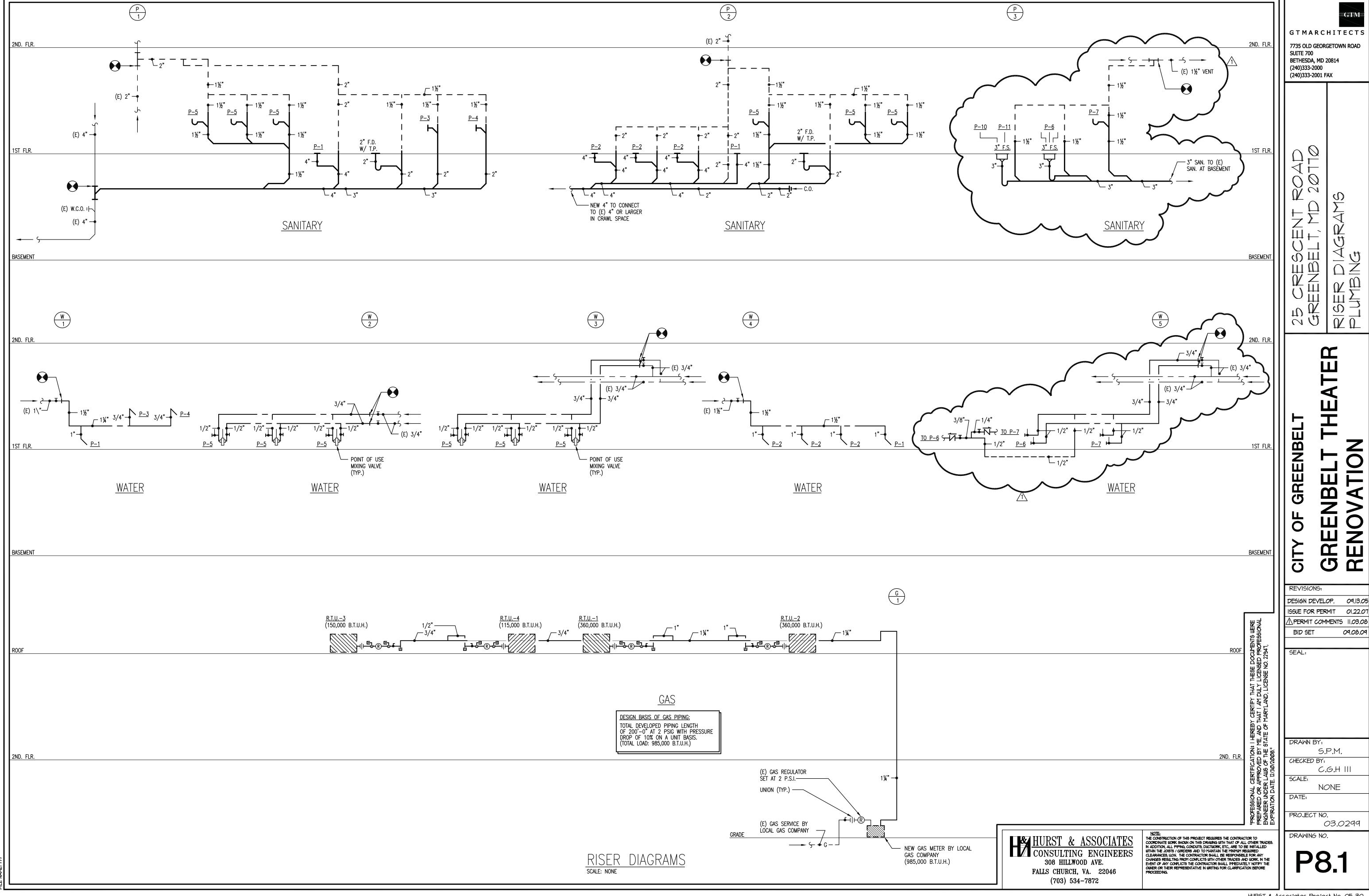


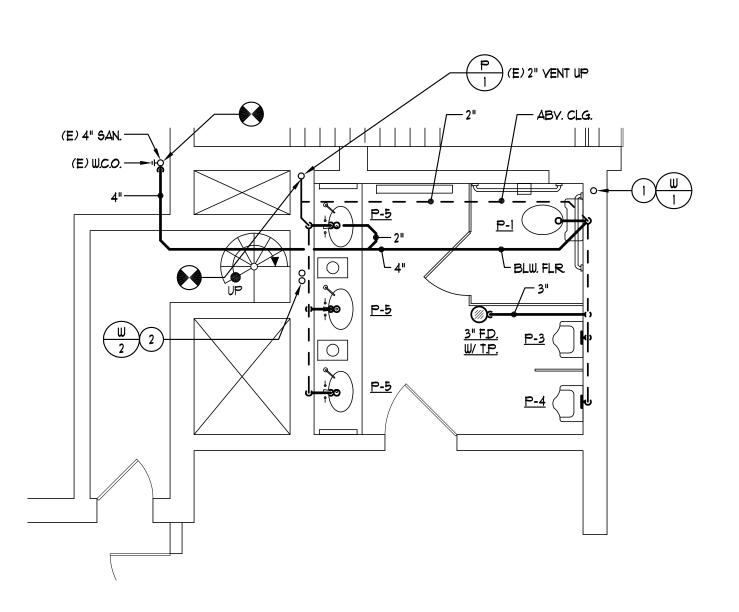




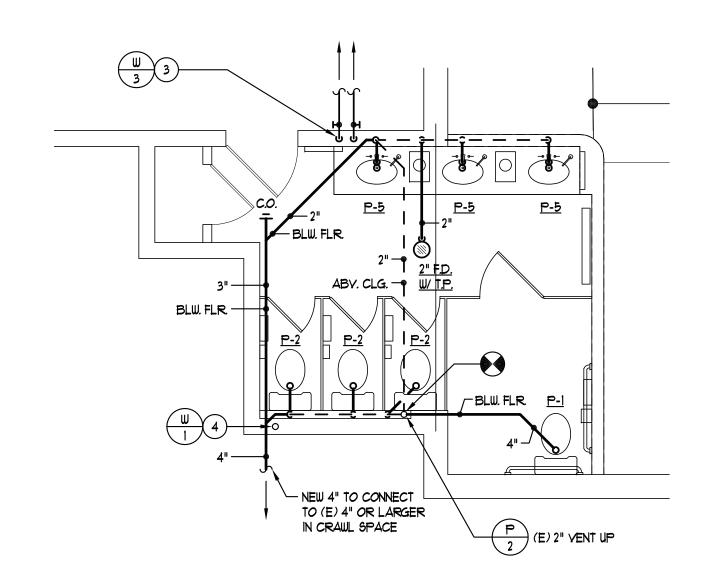








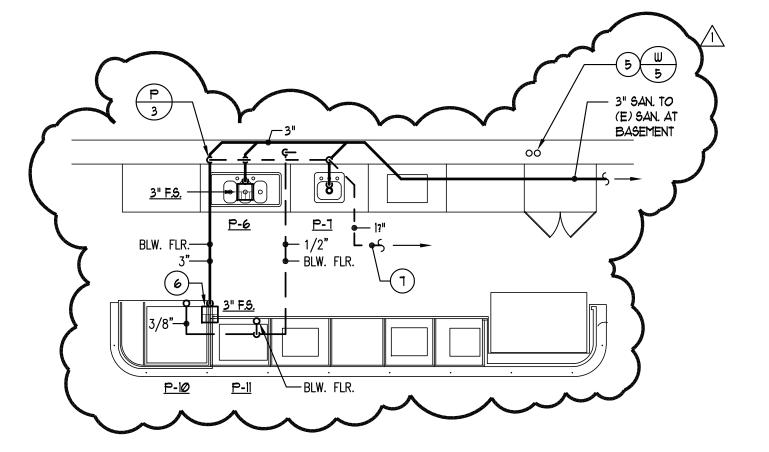
PARTIAL FIRST FLOOR PLAN - MENS ROOM - PLUMBING
P4.1 SCALE: 1/4"=1'-0"



2 PARTIAL FIRST FLOOR PLAN - WOMENS ROOM - PLUMBING
P4.1 9CALE: 1/4"=1'-0"

SHEET NOTES

- EXTEND EXISTING 11/2" CAPPED COLD WATER TO NEW WATER CLOSET AND URINALS. (SEE RISER DIAGRAMS FOR ADDITIONAL
- EXTEND EXISTING CAPPED 3/4" HOT AND COLD WATER TO NEW LAYATORIES. (SEE RISER DIAGRAMS FOR ADDITIONAL INFORMATION).
- EXTEND AND INSTALL NEW 3/4" HOT AND COLD WATER PIPING TO NEW LAVATORIES. (SEE RISER DIAGRAMS FOR ADDITIONAL INFORMATION).
- EXISTING 1½" COLD WATER TO EXTEND AND SUPPLY NEW WATER CLOSETS IN WALL. (REFER TO RISER DIAGRAMS FOR ADDITIONAL
- EXTEND EXISTING 3/4" HOT AND COLD WATER SUPPLY PIPING TO NEW SINKS IN WALL (REFER TO RISER DIAGRAMS FOR ADDITIONAL
- INDIRECT DRAINAGE TO DRAIN TO NEW 3" FLOOR SINK FROM EQUIPMENT PIECES P-10 AND P-11.
- CONTRACTOR TO CONNECT NEW 11/2" VENT PIPING TO EXISTING VENT PIPING ABOVE CEILING.



PARTIAL FIRST FLOOR PLAN - CONCESSION AREA - PLUMBING 3 PARTIA 9CALE: 1/4"=1'-0"

> HURST & ASSOCIATES CONSULTING ENGINEERS 308 HILLWOOD AVE. FALLS CHURCH, VA. 22046 (703) 534-7872

NOTE:
THE CONSTRUCTION OF THIS PROJECT REQUIRES THE CONTRACTOR TO COORDINATE WORK SHOWN ON THIS DRAWING WITH THAT OF ALL OTHER TRADES. IN ADDITION, ALL PIPING, CONDUITS, DUCTWORK, ETC., ARE TO BE INSTALLED WITHIN THE JOISTS / GIRDERS AND TO MAINTAIN THE MINIMIM REQUIRED CLEARANCES, WON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES RESULTING FROM CONFLICTS WITH OTHER TRADES AND WORK. IN THE EVENT OF ANY CONFLICTS THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OR THEIR REPRESENTATIVE IN WRITING FOR CLARIFICATION BEFORE PROCEEDING.

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ATER ENBEL N O GREENBEL RENOVATION

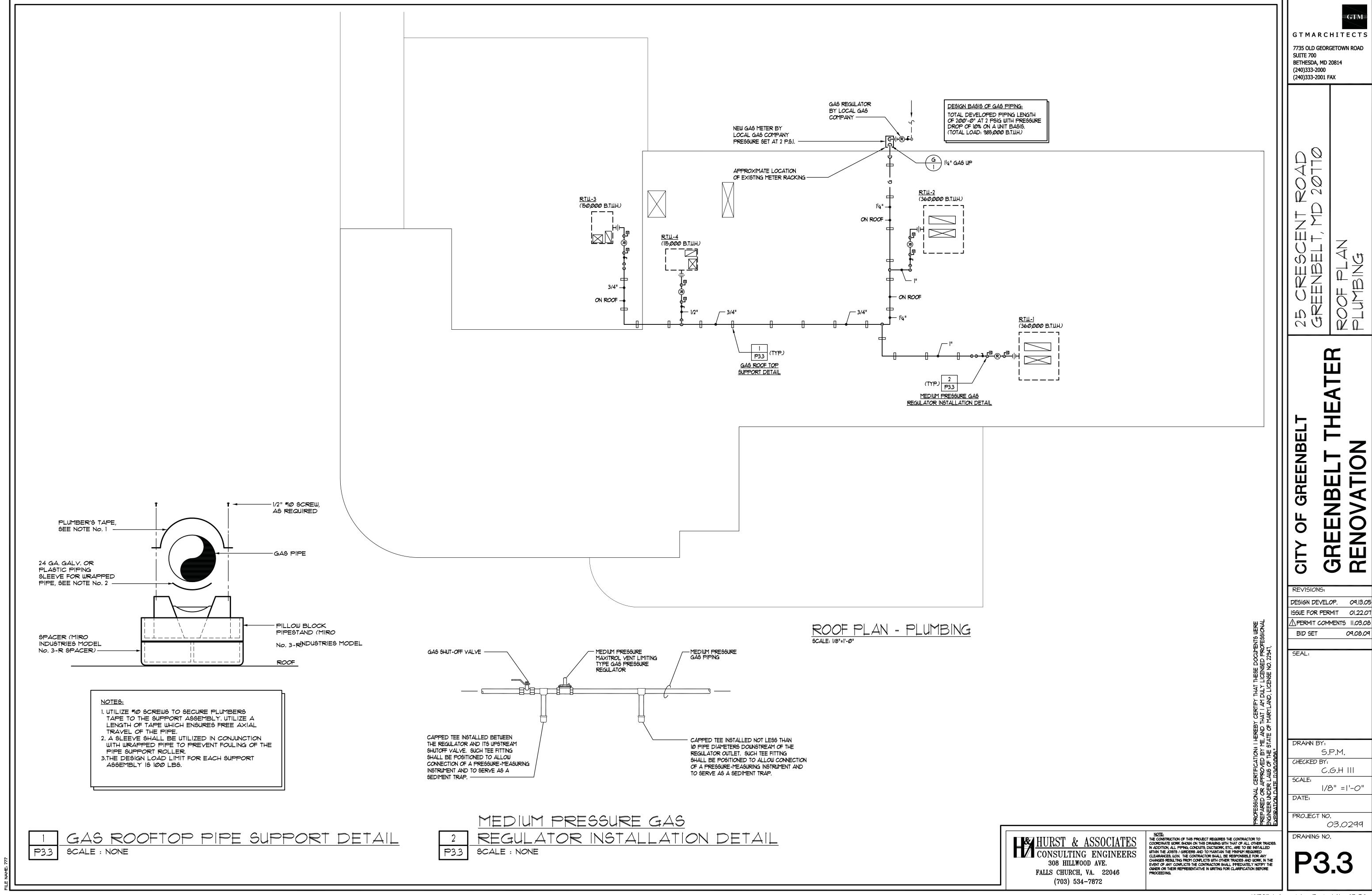
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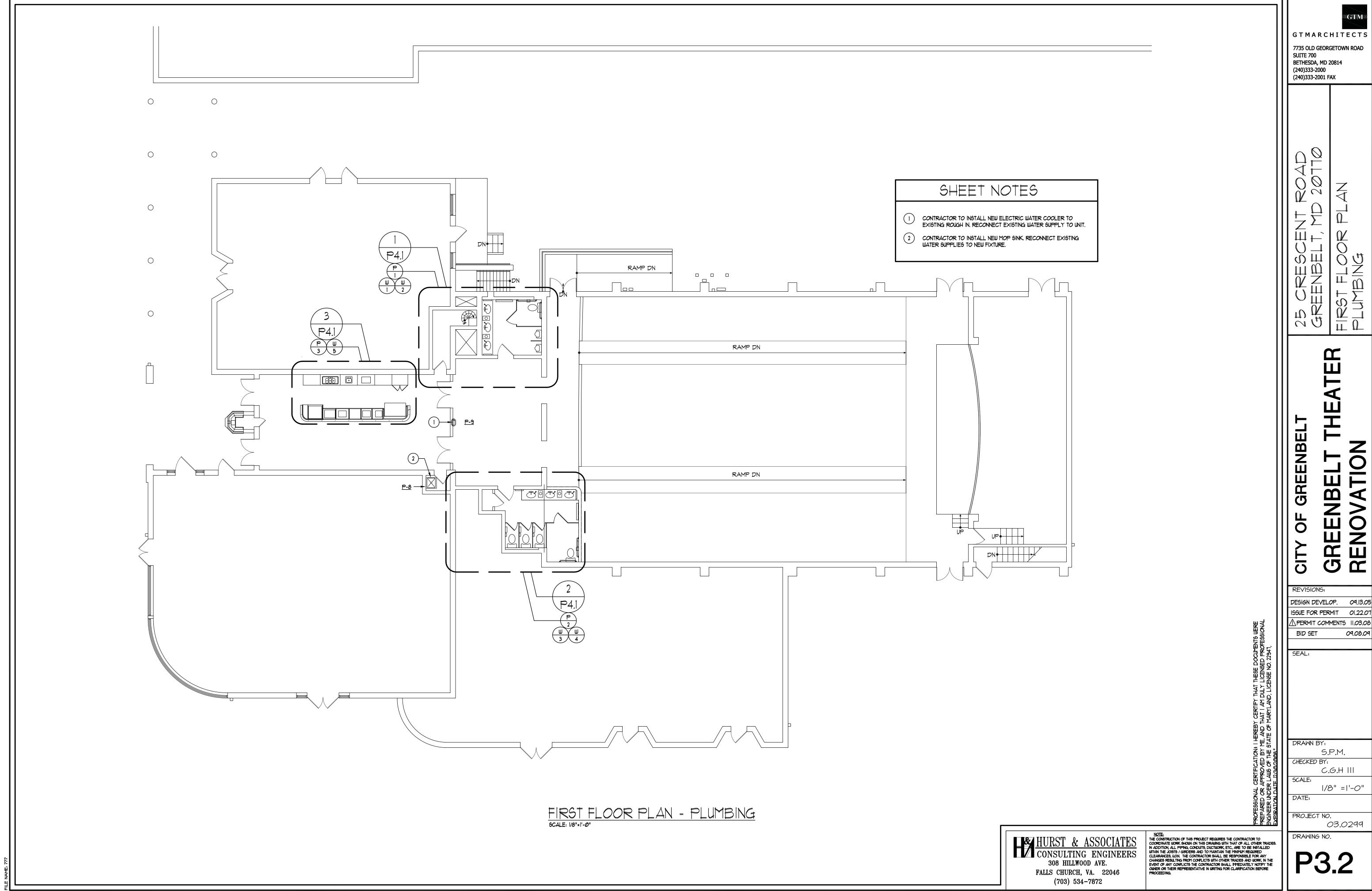
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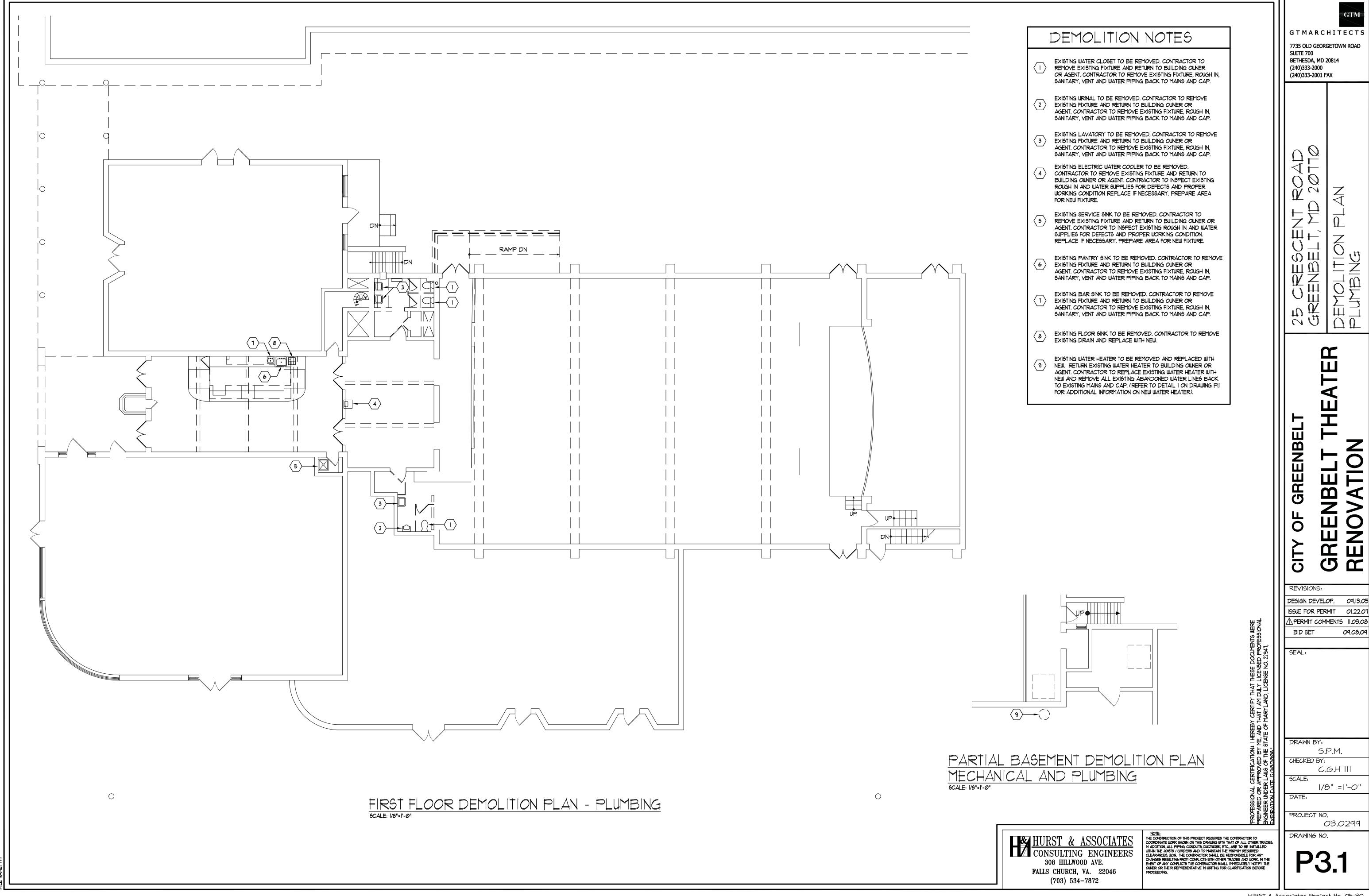
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CHECKED BY: C.G.H 111 SCALE: 1/4" =1'-0" DATE:

PROJECT NO. 03.0299 DRAWING NO.







| | PLUMBING DRAWING LIST | | |
|-------------------|-----------------------------|----------------------|--|
| DRAWING NUMBER | TITLE | NUMBER OF DRAWING | |
| PI.I | COVER SHEET - PLUMBING | 1 | |
| P3.1 | DEMOLITION PLAN - PLUMBING | 2 | |
| P3.2 | FIRST FLOOR PLAN - PLUMBING | 3 | |
| P3.3 | ROOF PLAN - PLUMBING | 4 | |
| P4.1 | PARTIAL PLANS - PLUMBING | 5 | |
| P8.1 | RISER DIAGRAMS - PLUMBING | 6 | |
| - | - | - | |

| HOT WATER SUPPLY | GATE VALVE | HEAT TRAP | | - VACUUM RELIEF VALVE WATTS MODEL No. N36 -A.S.M.E. COMBINATION TEMPERATURE AND PRESSURE RELIEF VALVE |
|--------------------------------|------------|-----------|----------|--|
| COLD WATER SUPPLY — | | | | -UNION (TYP.) -EXTEND TO AND SPILL |
| EXPANSION TANK | | | | OVER SAFE PAN |
| TO ELECTRICAL DISCONNECT SW | лтсн | | | |
| SPILL TO FLOOR DRAIN — | | | | -DRAIN VALVE |
| FLOOR DRAIN (IF AVAILABLE)— | | | | -SAFE PAN |
| | | | ▽ | FLOOR V P V V V |

| | | | SCHEDUL | _E OF | CA | PAC | ITIE: | 5 | | | | | | |
|----------|--|-------------|----------|-------|----|-----|-------|--|--|--|--|--|--|--|
| W.H. No. | W.H. No. STORAGE G.P.H. RECOVERY OPER WGT. ELECTRIC BASIS OF DESIGN | | | | | | | | | | | | | |
| | GALLONS | # 00 F RISE | LDS. | VOLTS | PH | Hz | KW | | | | | | | |
| 1 | 50 Gals. | 23 Gals. | 548 lbs. | 240 | 3 | 60 | 4.5 | A.O. SMITH MODEL No. DEN-80 (59.375" H., 24" DIA.) | | | | | | |
| _ | - | _ | _ | _ | _ | _ | _ | - | | | | | | |

FIXTURE CONNECTION SCHEDULE WASTE **YENT** C.W. DESCRIPTION H.W. REMARKS FLOOR MOUNTED, FLUSH VALVE WATER CLOSET HANDICAPPED FLOOR MOUNTED, FLUSH VALVE WATER CLOSET WALL HUNG, HANDICAPPED 3/4" URINAL WASH OUT FIXTURE, MOUNTED AT A.D.A. APPROVED HEIGHT WALL HUNG, WASH OUT FIXTURE 3/4" URINAL MOUNTED AT REGULAR HEIGHT COUNTER TOP, SELF RIMMING, HANDICAPPED LAVATORY 1/2" MOLDED ABS PLASTIC, SELF RIMMING WITH P-6 THREE COMPARTMENT SINK (3) 1?" GOOSENECK FAUCET, HANDICAPPED STAINLESS STEEL, SELF RIMMING /1 BAR SINK MOP SINK 1/2" 1/2" FLOOR MOUNTED, 24" x 24" WALL HUNG, BARRIER FREE P-9 | ELECTRIC WATER COOLER 1/2" 1/2" MOUNTED AT LOW A.D.A. HEIGHT ICE MACHINE DRAINS TO FLOOR SINK INDIRECTL /2" AND 3/4" ICE MACHINE PROVIDE BACKFLOW PROTECTION TO WATER SUPFL SODA MACHINE DRAIN TO FLOOR SINK INDIRECTL SODA MACHINE 1/4" PROVIDE BACKFLOW PROTECTION TO WATER SUPF

PLUMBING FIXTURE SPECIFICATIONS

P-1: WATER CLOSET (HANDICAPPED): AMERICAN STANDARD "MADERA" MODEL No. 23/05.10/0 IN WHITE, ELONGATED BOWL, 16 GALLONS PER FLUSH.
FLUSH YALYE: SLOAN MODEL No. 111.

SEAT: BEMIS MODEL No. 1955C, OPEN FRONT, ELONGATED SEAT IN WHITE.

SEAT: BEMIS MODEL No. 1955C, OPEN FRONT, ELONGATED SEAT IN WHITE.

FLUSH VALVE: SLOAN MODEL No. 111.

FLUSH VALVE: SLOAN ROYAL MODEL No. 186-1.

- P-2: WATER CLOSET (HANDICAPPED): AMERICAN STANDARD "MADERA" MODEL No. 2234.015 IN WHITE, ELONGATED BOWL, 16 GALLONS PER FLUSH.
- P-3: URINAL: (HANDICAPPED) AMERICAN STANDARD "LYNNBROOK" MODEL NO. 23/05.10/0, COLOR IN WHITE, MOUNTED AT LOW A.D.A. APPROVED HEIGHT.
- P-4: URINAL: (HANDICAPPED) AMERICAN STANDARD "LYNNBROOK" MODEL NO. 23/05.10/0, COLOR IN WHITE, MOUNTED AT REGULAR HEIGHT.
 FLUSH YALYE: SLOAN ROYAL MODEL No. 186-1.
- P-5: LAVATORY (HANDICAPPED): AMERICAN STANDARD "AQUALYNN" MODEL No. 0475.020 (20" x 17") SELF RIMMING, 8" CENTERS, IN WHITE.
 FAUCET: (HANDICAPPED) SYMMONS "SYMMETRIX" MODEL No. 5-244-2-G. TWO HANDLE WIDESPREAD WITH GRID DRAIN. TRAP INSULATION: TRUEBRO "LAV GUARD" INSULATION KIT No. 102W.
 POINT OF USE MIXING VALVES: SPARCO MODEL No. AM-100. BELOW LAVATORY (SET AT 105°)

P-6: THREE COMPARTMENT SINK: MOLI INTERNATIONAL MODEL NO. BHS-1736 WITH 3 HOLES AND 4" CENTERS ONLY

FAUCET: MOLI INTERNATIONAL GOOSENECK DECK MOUNTED FAUCET. (INCLUDED)

- P-7: BAR SINK: ELKAY MODEL No. CHSITIGC WALL HUNG, STAINLESS STEEL.
 FAUCET: ELKAY MODEL No. LK499A CHROME PLATED 8-3/8" HIGH GOOSENECK SPOUT. (FURNISHED WITH SINK).
 AERATOR: AEI3A (FURNISHED).
 GRID DRAIN: LK8 C.P. (FURNISHED).
 P-TRAP: LK500 CHROME CAST BRASS "P" TRAP WITH CLEANOUT. (FURNISHED).
- P-8: MOP SERVICE SINK- ACORN MODEL No. 303006-BDS.
 FAUCET: ACORN MODEL No. KFC PROVIDED WITH VACUUM BREAKER.
 ACCESSORIES: WITH OPTIONAL STRAINER (-BDS), 36" BUMPER GUARD MODEL No. KBGY,
 STAINLESS STEEL (2) WALL GUARD KWG, KMH WALL HANGAR WITH 3 GRIPS AND KH36 HOSE BRACKET.
- P-9: ELECTRIC WATER COOLER: (HANDICAPPED) ELKAY MODEL No. EZSO WITH FLEXI-GUARD BUBBLER WITH A LIGHT GRAY GRANITE FINISH.

FLOOR DRAIN: ZURN MODEL No. ZN-415-NL-P WITH TYPE "B" STRAINER.

TRAP PRIMER: MIFAB M-500 SERIES.

FLOOR SINK: JOSAM MODEL No. 49343A-NB-X. 8-3/4" DEEP WITH 10" x 10" NICKEL BRONZED SQUARE GRATE AREA WITH ACID RESISTANT INTERIOR, BOTTOM OUTLET, ALUMINUM INTERNAL DOME STRAINER WITH FLANGE INCLUDED. CONTRACTOR TO ORDER GRATE PER FIELD CONDITIONS. (OR APPROVED EQUAL).

GENERAL NOTES

- DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF WORK. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO HIS BIDDING, INVESTIGATE ALL CONDITIONS THAT AFFECT HIS WORK, VERIFY LOCATIONS OF SANITARY SEWERS, STORM WATER SEWERS, WATER MAINS, AND NATURAL GAS MAINS AND MAKE CERTAIN THAT ALL NEW CONNECTIONS CAN BE MADE.
- 2. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LOCAL PLUMBING CODES, BUILDING CODES, STATE REGULATIONS AND ORDINANCES AND LOCAL CODE SUPPLEMENTS.
- EVERY FIXTURE, DEVICE, APPARATUS, OR PIECE OF EQUIPMENT WHICH CONVEYS, USES OR IS ACTIVATED BY WATER SHALL BE OF SUCH DESIGN AND BE INSTALLED IN SUCH A MANNER THAT THE DOMESTIC WATER SYSTEM IS PROTECTED AGAINST CONTAMINATION.
- ALL PLUMBING PIPING SHALL BE CLOSELY COORDINATED WITH OTHER TRADES INCLUDING MECHANICAL EQUIPMENT, LIGHTING FIXTURES, CONDUITS, ROOF STRUCTURE, ETC... PRIOR TO ANY PIPING INSTALLATION.
- KEEP ALL PIPING AS HIGH AS POSSIBLE, ABOVE CEILINGS AND IN JOIST SPACES AND AT THE LEVEL OF ROOF STRUCTURE WHERE THERE ARE NO CEILINGS.
- CLEANOUTS SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS AND AS REQUIRED BY THE PLUMBING CODE.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL WALLS, CEILINGS, DOORS, FLOORS AND PLUMBING FIXTURES, ETC.
- . THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL PERMITS, INSPECTIONS AND ANY REINSPECTIONS THAT ARE REQUIRED.
- ALL WATER PIPING ABOVE FLOOR SHALL BE TYPE "L" COPPER. UNDERGROUND WATER PIPING SHALL BE TYPE "K" COPPER. INSULATE ALL WATER PIPING WITH I" THICK FIBERGLASS INSULATION.
- 10. ALL SOIL, WASTE, VENT OR STORM PIPING SHALL BE SCHEDULE 40 PVC. (EXCEPT IN AIR PLENUM SPACE, USE DWY COPPER OR CAST IRON).
- . ALL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE.

FIRE PROTECTION NOTES

- 1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO HIS BIDDING AND SHALL SURVEY ALL CONDITIONS THAT AFFECT HIS WORK.
- ALL SPRINKLER SYSTEMS REQUIRED FOR THIS PROJECT SHALL BE MODIFIED TO STRICT ACCORDANCE WITH ALL REQUIREMENTS OF N.F.P.A. 13 AND ALL STATE AND LOCAL FIRE MARSHAL REGULATIONS, CODES AND ORDINANCES.
- 3. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN APPROYAL OF ALL SPRINKLER SHOP DRAWINGS AND EQUIPMENT FROM THE FIRE MARSHAL AND THE REVIEW OF THE ENGINEER.

<u>NEW WORK</u>

4. IT SHALL BE THE SOLE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR TO PROVIDE AND INSTALL A SPRINKLER SYSTEM FOR THIS PROJECT. SPRINKLER CONTRACTOR SHALL INSTALL A NEW OR MODIFY THE EXISTING SPRINKLER SYSTEM PER ALL N.F.P.A. REQUIREMENTS FOR THIS PROJECT.

SYMBOLS AND ABBREVIATIONS

EXISTING WORK

| | - SANITARY PIPING (SAN.) | | — (E) SANITARY PIPING (S | ANI Y |
|----------------|---------------------------------------|--------|--------------------------|---|
| | | | | |
| | VENT PIPING | | — (E) COLD WATER PIPING | : (C.W.) |
| | — COLD WATER PIPING (C.W.) | —— G— | — (E) GAS PIPING | |
| | — HOT WATER PIPING (H.W.) | 0 | (E) PIPE TURNING UP | |
| — G — | — GAS PIPING | C | — (E) PIPE TURNING DOWN | |
| <u> </u> | — GAS VALVE | D | — (E) CLEANOUT (C.O.) | |
| — — | — UNION | Д | BBREVIATIONS | |
| | — GAS PRESSURE REGULATOR | ABV. | ABOVE | |
| <u>_</u> | — GATE VALVE | BLW. | BELOW | ш ; |
| | CLEANOUT AT | CLG. | CEILING | |
| | FINISHED FLOOR | C.O. | CLEANOUT | _ _ _ _ _ _ _ _ _ _ _ _ _ \ |
| | — PIPE TURNING UP | (E) | EXISTING | DOCUMENTS WERE ED PROFESSIONAL 2. 22941, |
| | - PIPE TURNING DOWN | FLR | FL00R | 1 DOC 1 SEED 1 |
| <u>¬</u> ¬¬ | - BACKFLOW PREVENTER (B.F.P.) | T.P. | TRAP PRIMER | THESE DO LICENSED :NSE NO. 2 |
| | | TYP. | TYPICAL | |
| | POINT OF CONNECTION (NEW TO EXISTING) | V.T.R. | VENT THROUGH ROOF | THAT DULY 7, LIG |
| | THE TO EXISTING? | W/ | WITH | |
| $\binom{p}{l}$ | RISER DESIGNATIONS | | | Y CERTIFY THAT I AM MARYLAN |
| • | P SANITARY | | | 一、「玉丈」 |
| | W WATER | | | * I HEREBY ME, AND T STATE OF 1 |
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| | | | | 英型語 |
| | | | | 1 2 + |

HURST & ASSOCIATES

CONSULTING ENGINEERS

308 HILLWOOD AVE.

FALLS CHURCH, VA. 22046

(703) 534-7872

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PROCEEDING.

GTM GTMARCHITECTS

7735 OLD GEORGETOWN ROAD SUITE 700 BETHESDA, MD 20814 (240)333-2000 (240)333-2001 FAX

25 CRESCENT ROAGNEELT, MD 20-

CITY OF GREENBELT

GREENBELT THEATE

RENOVATION

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REVISIONS:

DESIGN DEVELOP. 09.13.05

ISSUE FOR PERMIT 01.22.07

PERMIT COMMENTS 11.03.08

BID SET 09.08.09

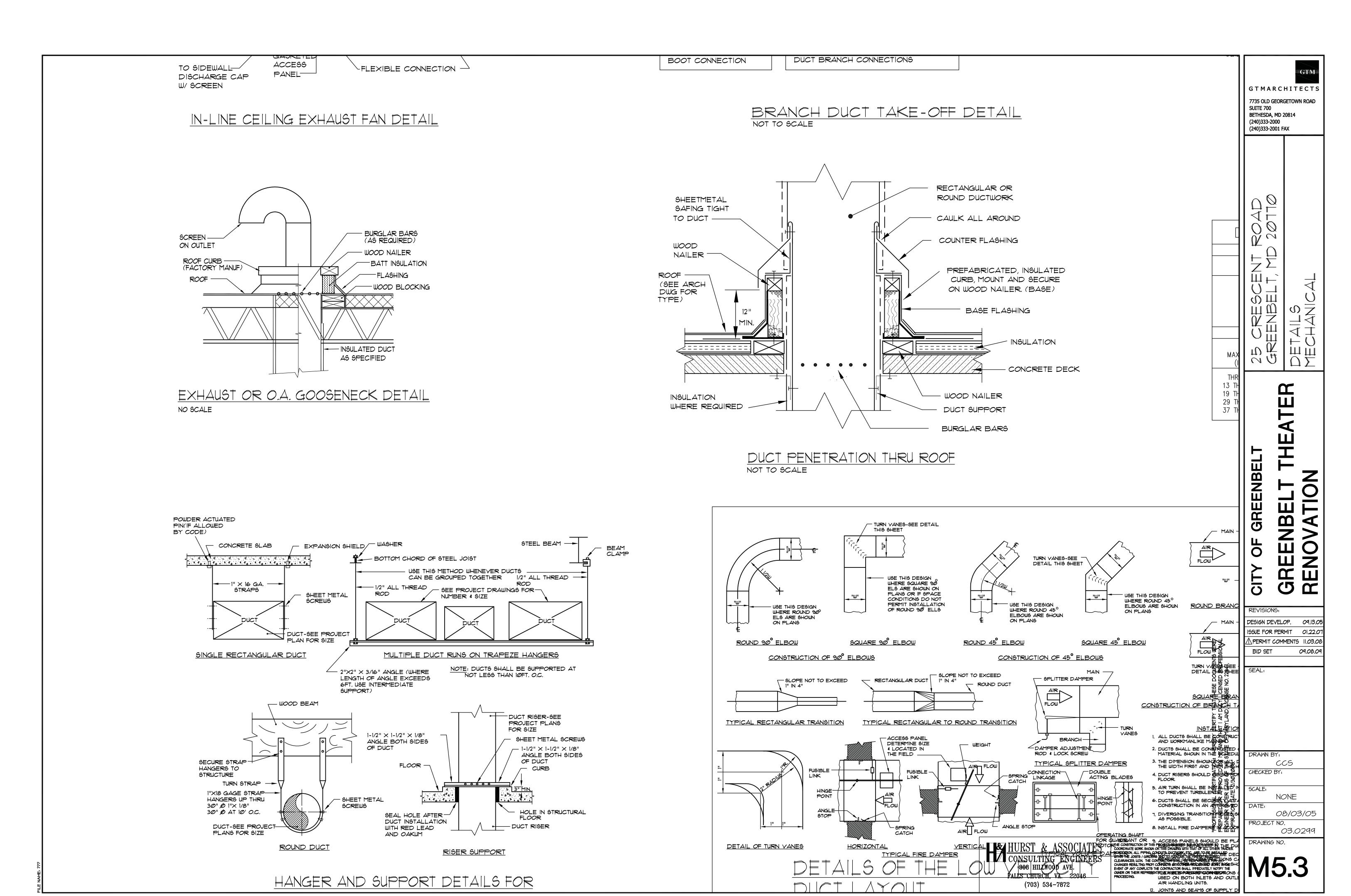
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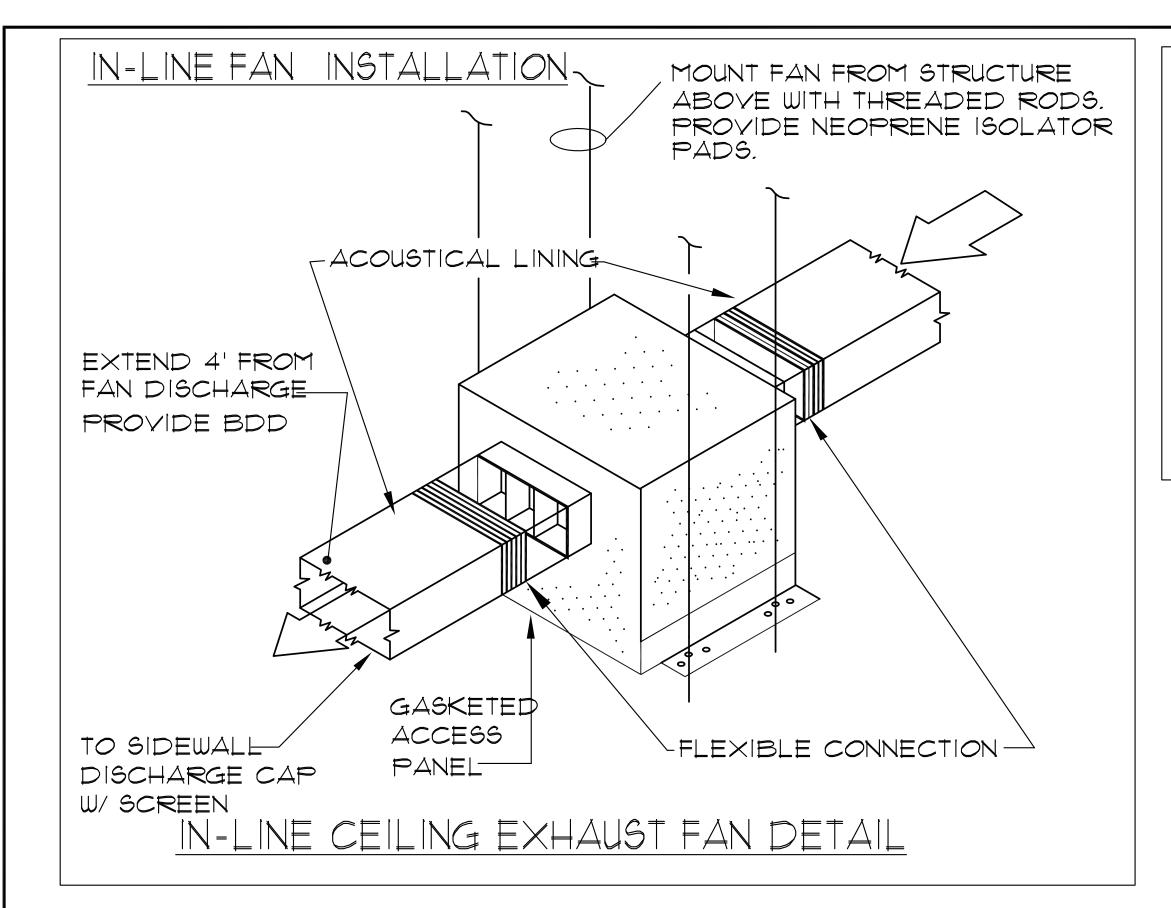
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CHECKED BY:
C.G.H III
SCALE:
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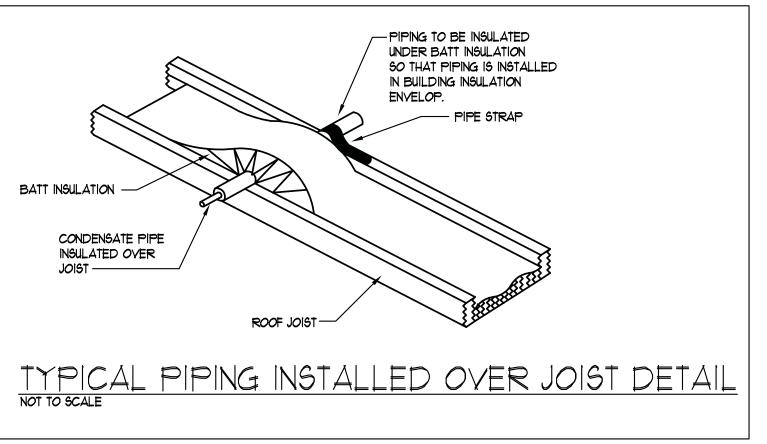
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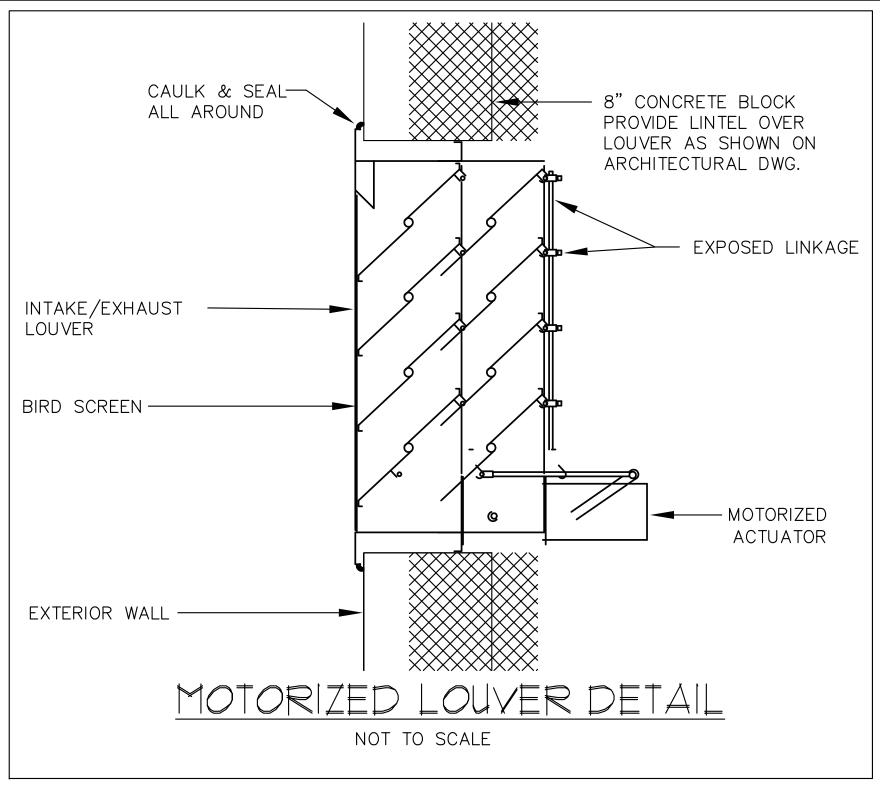
03.0299

PROJECT NO.









GTM

GTMARCHITECTS

7735 OLD GEORGETOWN ROAD

CITY OF GREENBELT
GREENBELT THEATER
RENOVATION

REVISIONS:

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SCALE: NONE

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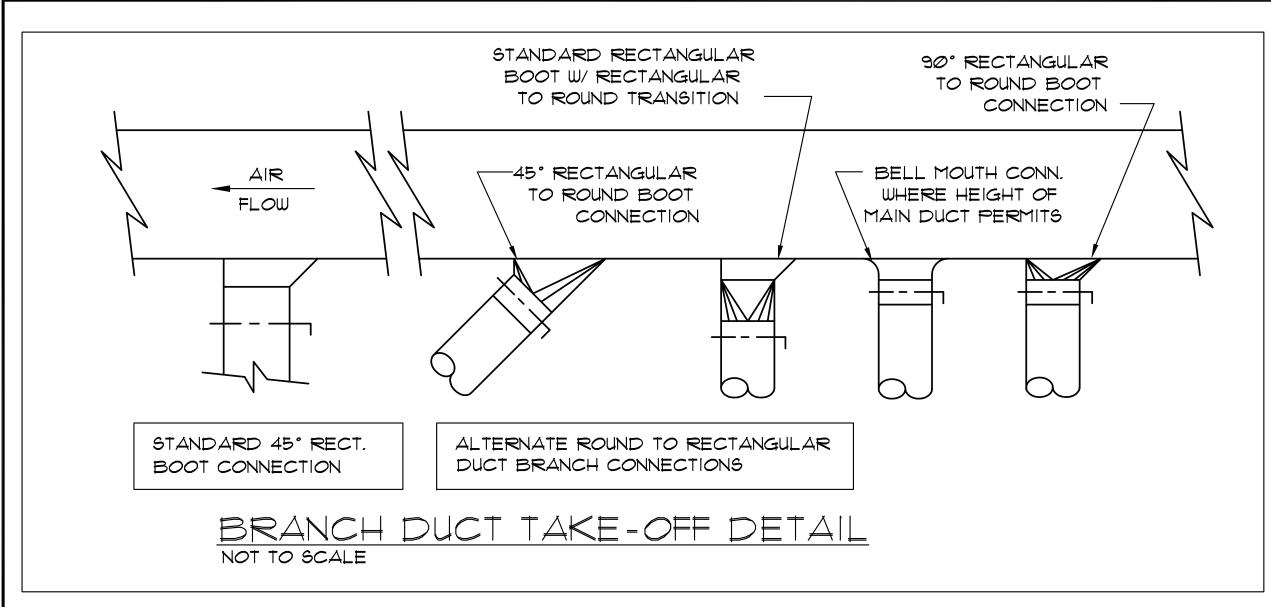
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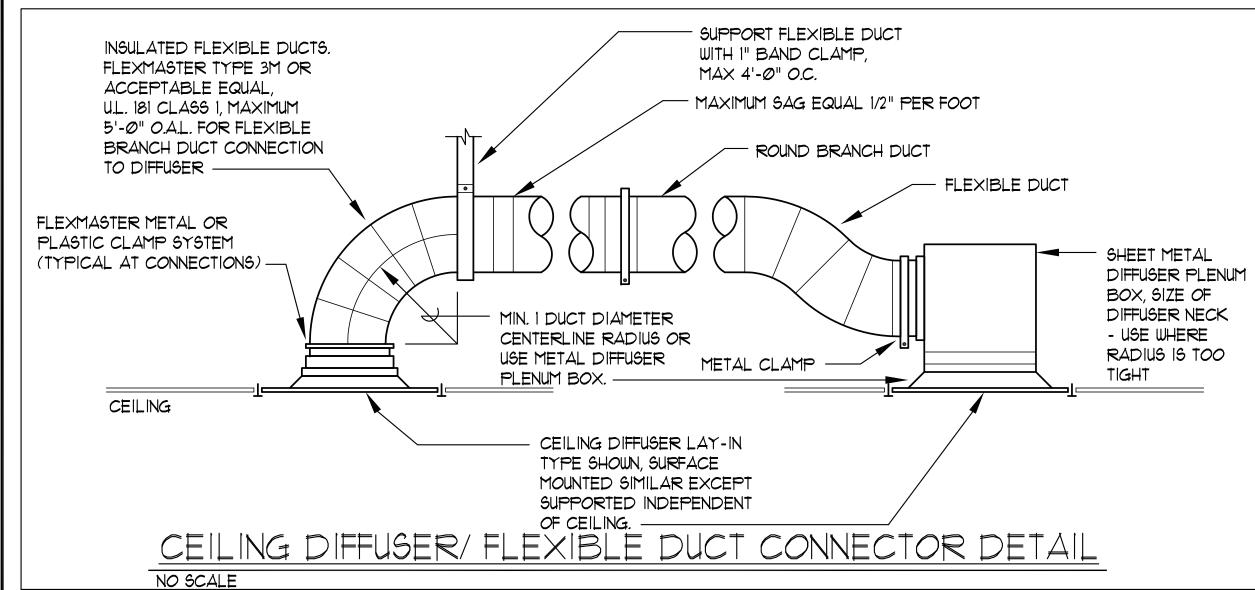
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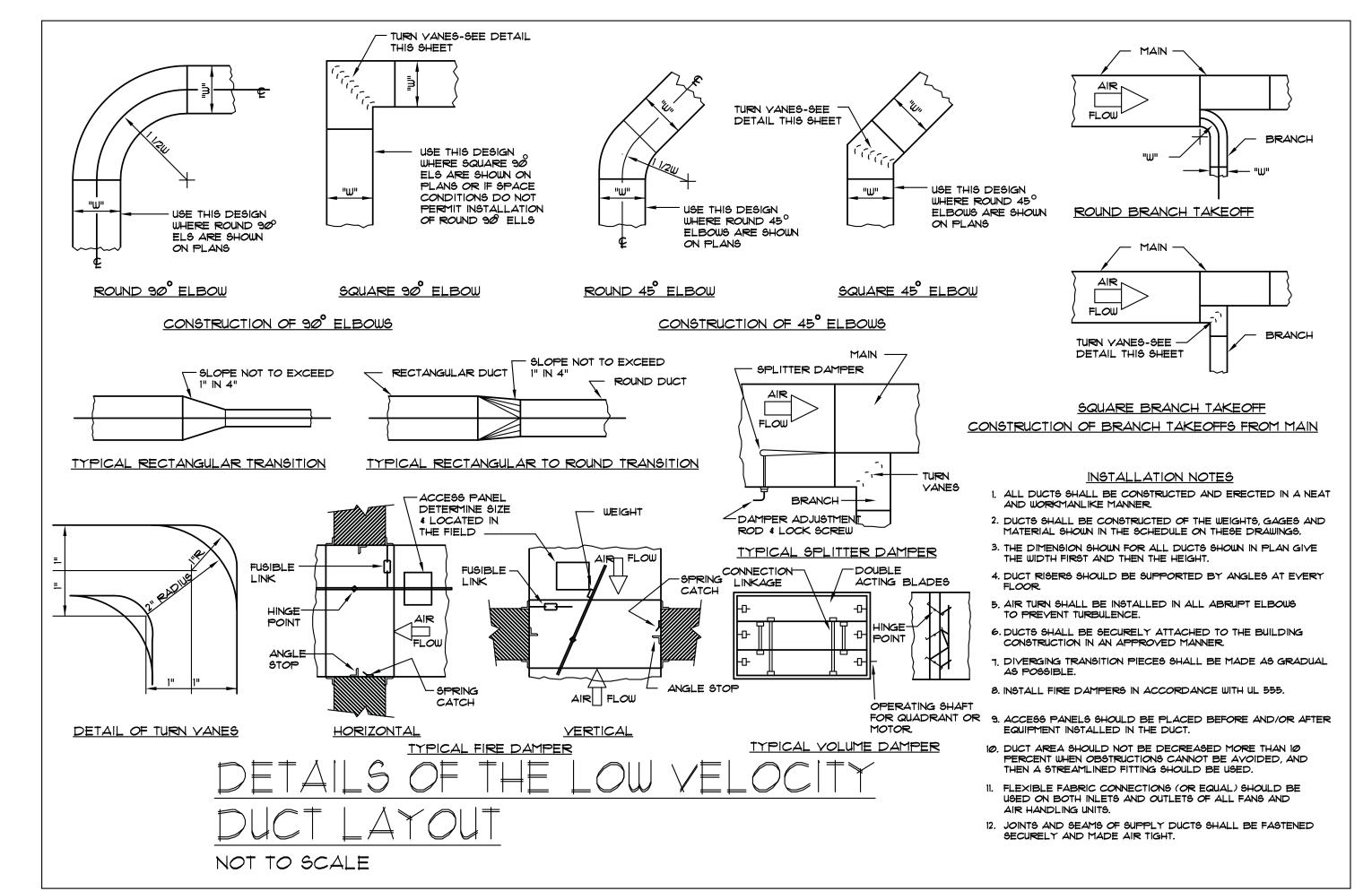


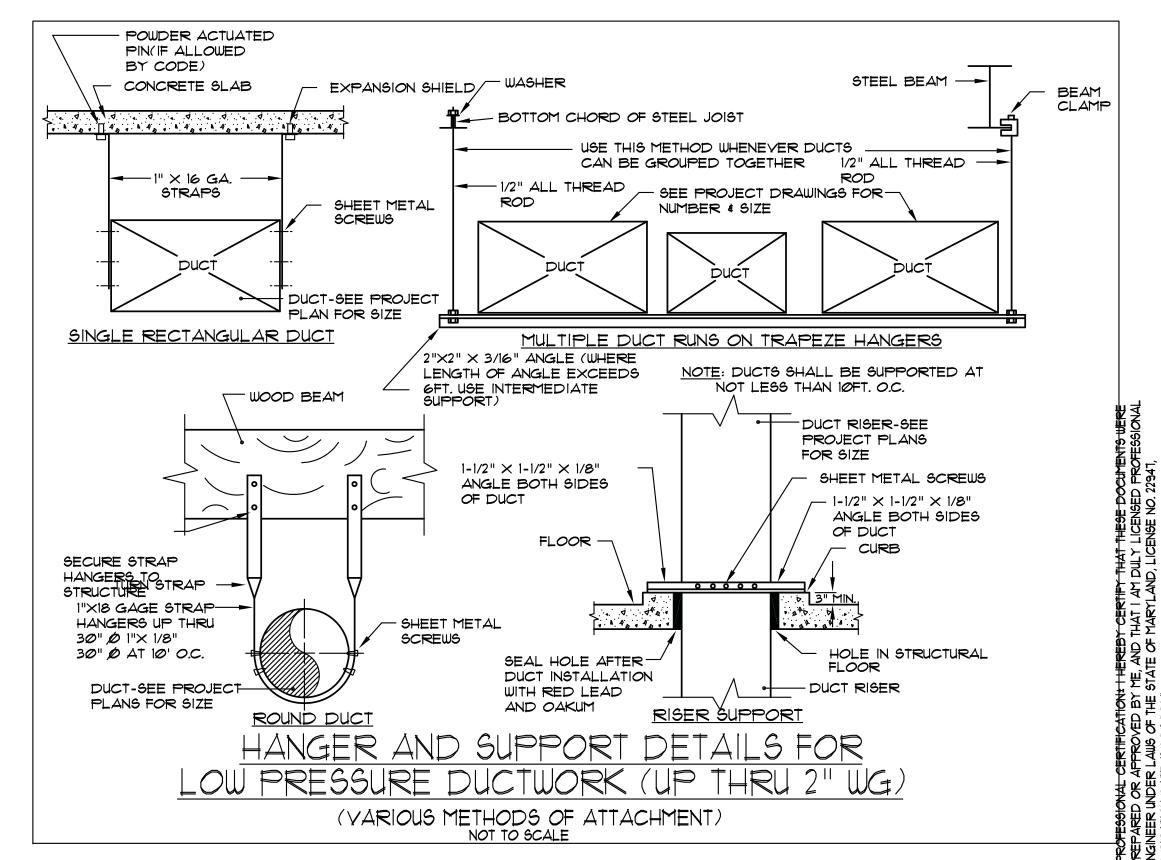


DUCT CONSTRUCTION MINIMUM SHEET METAL THICKNESSES

| | RECTANGULAR DUCTS | S |
|--|---|--|
| MAXIMUM SIZE (INCHES) | STEEL (MINIMUM THICKNESS, NOMINAL) | ALUMINUM (MINIMUM THICKNESS, NOMINAL) |
| THROUGH 12 13 THROUGH 30 31 THROUGH 54 55 THROUGH 84 OVER 84 | 0.022 INCH (26 GAGE, GALV.) 0.028 INCH (24 GAGE, GALV.) 0.034 INCH (22 GAGE, GALV.) 0.040 INCH (20 GAGE, GALV.) 0.052 INCH (18 GAGE, GALV.) | 0.020 INCH (NO. 24 B&S GAGE) 0.025 INCH (NO. 22 B&S GAGE) 0.032 INCH (NO. 20 B&S GAGE) 0.040 INCH (NO. 18 B&S GAGE) 0.051 INCH (NO. 16 B&S GAGE) |

| | RO | OUND DUCTS | |
|--|---|---|---|
| | SPIRAL SEAM DUCT | LONGITUDINAL SEAM DUCT | FITTINGS |
| MAXIMUM SIZE (INCHES) | STEEL (MINIMUM THICKNESS, NOMINAL) | STEEL (MINIMUM THICKNESS, NOMINAL) | STEEL (MINIMUM THICKNESS, NOMINAL) |
| THROUGH 12 13 THROUGH 18 19 THROUGH 28 29 THROUGH 36 37 THROUGH 52 | 0.019 INCH (28 GAGE, GALV.) 0.022 INCH (26 GAGE, GALV.) 0.028 INCH (24 GAGE, GALV.) 0.034 INCH (22 GAGE, GALV.) 0.040 INCH (20 GAGE, GALV.) | 0.022 INCH (26 GAGE, GALV.) 0.028 INCH (24 GAGE, GALV.) 0.034 INCH (22 GAGE, GALV.) 0.040 INCH (20 GAGE, GALV.) 0.052 INCH (18 GAGE, GALV.) | 0.022 INCH (26 GAGE, GALV.) 0.028 INCH (24 GAGE, GALV.) 0.034 INCH (22 GAGE, GALV.) 0.040 INCH (20 GAGE, GALV.) 0.052 INCH (18 GAGE, GALV.) |





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| 25 CRESCENT ROAD GREENBELT, MD 20170 | DETAILS | DETAILS

GTMARCHITECTS

7735 OLD GEORGETOWN ROAD

BETHESDA, MD 20814 (240)333-2000

(240)333-2001 FAX

GREENBELT THEAT RENOVATION

| | REVISIONS: |
|--|---------------------------|
| | DESIGN DEVELOP. 09,13,09 |
| | ISSUE FOR PERMIT 01,22,0 |
| | ⚠PERMIT COMMENTS 11.03.08 |
| | BID SET 09.08.09 |
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| σ Xii | PROJECT NO. 03.0299 |
| | DRAWING NO. |

| | | | | | | PACK, | 4GED | ROC | OFTO! | = UN | | etu) (| 3CH | EDUL | E (1 | OX C | COOLI | VG/G | :AS | HE, | <u>ATIN</u> | G) | | |
|-------|---------------------|--------|----------------------|-----------------------|----------------------|-----------------------|--------------|---------------|-------|------|---|-------------|-----|-------------|--------------------|-------------|-------------------|-------|----------|-----|-------------|------------------------|------|------------------------------|
| UNIT | MANUFACTURER | LOCAT. | COOLING (95 F db | CAPACITY - 61 F wb | HEATING (| CAPACITY | | EVAPOR BLO | | | | | | ELECTRI | CAL DA | ATA | | | | | | | OPT. | NOTES |
| MARK | # MODEL | | TOTAL | SENS. CAP. MBH | INPUT CAP. MBH | OUTPUT CAP. MBH | TOTAL | O.A. | ESP | COM | COMPRESSOR(S) EVAP. BLOWER COND. FAN(S) COMB. | | | | VOLTS PH UNIT UNIT | | | UNIT | WT (LBS) | | | | | |
| | | | CAP. MBH | MBH | MBH | MBH | TOTAL CFM | O.A. CFM | H2Ø | QTY | RLA (EA) | LRA (EA) | HP | RLA (EA) | QTY | RLA (EA) | AIR FAN RLA | VOLIO | | | MCA | UNIT MOCP (HACR) | | \triangle |
| RTU-1 | CARRIER TMFØ25 | ROOF | 223 | 122 | 360 | 292 | 8000 | 2000 | 1.2 | 2 | 42.Ø/33.6 | 239/225 | 7.5 | 25.0 | 2 | 6.6 | .60 | 208 | 3 | - | 129 | 150 | 225Ø | 1,3,4,6,7,8,9,10,11,13,17,21 |
| RTU-2 | CARRIER TMFØ2Ø | ROOF | 221 | 116 | 360 | 292 | 7400 | 1800 | 1.2 | 2 | 3Ø.1/28.8 | 225/195 | 5.0 | 15.8 | 3 | 1.7 | .60 | 208 | 3 | • | 92 | 110 | 2150 | 1,3,4,6,7,8,9,10,11,13,17,21 |
| RTU-3 | CARRIER 48HJFØØ6 | ROOF | 62.5 | 43.8 | 150 | 120 | 2000 | 48Ø | 1.0 | 1 | 17.3 | 123.0 | - | 5.8 | 1 | 1.5 | .60 | 208 | 3 | - | 34.9 | 40 | 950 | 1,3,4,6,7,8,9,10,11,13,17,21 |
| RTU-4 | CARRIER 48HJFØØ4 | ROOF | 37.8 | 27.2 | 115 | 93 | 950 | 200 | 1.0 | 1 | 10.3 | 77.Ø | - | 4.9 | 1 | Ø.1 | .60 | 208 | 3 | • | 24.5 | 3Ø | 750 | 1,3,4,6,7,8,9,10,11,13,17,21 |
| - | - - | | - | - | - | - | • | - | - | • | - | - | - | - | - | - | - | • | - | - | - | - | - | - |
| - | - - | - | - | - | - | - | - | - | - | • | - | - | - | - | - | - | - | • | - | - | - | - | - | - |
| - | - - | - | - | - | - | - | • | - | - | • | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | _ | - | - | - | - | - | - | - | - | - | - | - | - | _ | - | - | - | - | - | - | - |

PROVIDE ROOF TOP UNIT WITH DUCT SMOKE DETECTOR IN RETURN AND SUPPLY AIR DUCT AS PER CODE.

2. ROOF TOP UNIT SHALL BE VERTICAL DISCHARGE TYPE WITH ROOF OPENINGS INSIDE OF FULL PERIMETER ROOF CURB.

3. ROOF TOP UNIT SHALL BE HORIZONTAL DISCHARGE TYPE.

4. PROVIDE ROOF TOP UNIT WITH ECONOMIZER PACKAGE, COMPLETE WITH ECONOMIZER HOOD, ENTHALPY CONTROLS AND SENSORS.

5. PROVIDE UNIT WITH DUAL POWER CONNECTIONS: (1) FOR FANS AND HEATING COMPONENTS-FURNACE AND CONTROLS (2) FOR THE REFRIGERANT COMPONENTS - COMPRESSORS AND CONDENSERS. WIRING BETWEEN FAN CIRCUITS AND EMERGENCY POWER

AND TRANSFER SWITCH SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AS NOTED IN DIVISION 16 OF THE SPECIFICATIONS. 6. PROVIDE ROOF TOP UNIT WITH FULL PERIMETER, FACTORY FABRICATED, INSULATED ROOF CURB.

1. PROVIDE ROOF TOP UNIT WITH ANTI-SHORT CYCLE CONTROLS.

8. PROVIDE ROOF TOP UNIT WITH LOW AMBIENT COOLING CONTROLS. (MOTOR MASTER)

9. PROVIDE ROOF TOP UNIT WITH PROGRAMMABLE WALL MOUNTED THERMOSTAT. CONTRACTOR TO ALLOW FOR MOUNTING OF WALL THERMOSTAT IN SPACE SERVED BY RTU. FINAL LOCATION TO BE DETERMINED BY OWNER. CONTRACTOR TO MAKE PROVISION FOR ANY LOCATION CHOSEN.

10. PROVIDE UNIT WITH "HUMIDITROL" HUMIDITY CONTROL HOT GAS RECLAIM SYSTEM & CONTROLS INCLUDING HUMIDISTAT. (FOR TRANE SUBSTITUTION PROVIDE MORGANIZER SYSTEM) FOR OTHER PROVIDE SYSTEM EQUAL TO MOISTURE MIZER.

/2

11. PROVIDE FLUE HOOD DISCHARGE DEFLECTOR W/ FLUE EXTENSION TO 42" ABOVE RTU. 12. PROVIDE 2 POSITION OUTSIDE AIR DAMPER.

13. PROVIDE UNIT W/ 120Y CONVENIENCE OUTLET.

14. PROVIDE W/ 24" HIGH CURB

15. EMERGENCY HEAT CONTROL.

16. PROVIDE W/ COMPLETE OPERATIONAL "VYT-YARIABLE VOLUME TEMPERATURE" CONTROL SYSTEM AS SHOWN ON DWG. PROVIDE WITH CARRIER 3V CONTROLS.

17. PROVIDE W/ VIBRATION ISOLATION CURB ASSEMBLY.

18. PROVIDE W/ PHASE MONITORS AND CONTROL.

19. PROVIDE W/ MICRO-METAL CONCENTRIC DIFFUSER - DROP DIFFUSER - 4WAY THROW.

20. UNITS TO BE SUITABLE FOR USE OF PROPANE AS HEATING FUEL.

21. PROVIDE UNIT WITH CO2 SENSOR AND CONTROL TO MODULATE OUTSIDE AIR DAMPER (CARRIER 3Y SYSTEM). SET FOR 1100 PPM CO2.

22. PROVIDE WITH CARRIER 3Y CONTROL SYSTEM.

| | AIR DI | STRIBUTIO | ON DEV | ICE SC | HEDUL | -E |
|--------------|--------------------------------------|-----------|----------|--------------------------|---------------------------|----------------------------|
| TYPE | DESCRIPTION | CFM RANGE | NECK | FACE | MFGR MODEL (*) | NOTES |
| CD-1, 2 | SQUARE/RECT. CEILING DIFFUSER | AS SHOWN | AS SHOWN | LOUVER | TITUS TMSA-AA | 1*, 2*, 3, 4, 5, 9, 12, 13 |
| CD-3 | ROUND CEILING DIFFUSER | AS SHOWN | AS SHOWN | LOUVER | TITUS TMRA-AA | 1*, 2*, 3, 4, 5, 9, 12, 13 |
| CR-1 | CEILING REGISTER (SUPPLY) | AS SHOWN | AS SHOWN | BARS SINGLE DEFL | TITUS 3Ø1 FS | 1, 2, 3, 4, 5, 7, 13 |
| SWR-1 | SIDEWALL REGISTER | AS SHOWN | AS SHOWN | AERO BARS DOUBLE DEFL | TITUS 272RS | 1/2*, 3, 4, 5, 7, 13, 15 |
| SWR-2 | SIDEWALL REGISTER | AS SHOWN | AS SHOWN | BARS SINGLE DEFL | TITUS 3Ø1 FS | 1/2*, 3, 4, 5, 7, 13 |
| RR-1 R/P | RETURN AIR DEVICE (CEILING) | AS SHOWN | AS SHOWN | PERFORATED | TITUS PAR-AA | 1/2*, 3, 4, 5, 13 |
| RR-2 | RETURN REGISTER (CEILING / WALL) | AS SHOWN | AS SHOWN | BARS AT 35° DEFL | TITUS 35Ø-FL | 1/2*, 3, 4, 5, 6, 13 |
| RR -3 | RETURN REGISTER W/ FILTER | AS SHOWN | AS SHOWN | BARS AT 35° DEFL | TITUS 350 RFI | 2, 3, 4, 6, 20, 21 |
| ER-I | EXHAUST REGISTER (CEILING / WALL) | AS SHOWN | AS SHOWN | PERFORATED | TITUS PAR-AA | 1/2*, 3, 4, 5, 13 |
| ER-2 | EXHAUST REGISTER (CEILING / WALL) | AS SHOWN | AS SHOWN | BARS AT 35° DEFL | TITUS 355FL | 1/2*, 3, 4, 5, 6, 13 |
| TG-1 | TRANSFER GRILLE (CEILING) | AS SHOWN | AS SHOWN | PERFORATED | TITUS PAR-AA | 1/2*, 3, 4, 5, 13 |
| TG-2 | TRANSFER GRILLE (CEILING / WALL) | AS SHOWN | AS SHOWN | BARS AT ذ DEFL | TITUS 35 <i>0-Z</i> FL | 1/2*, 3, 4, 5, 6, 13 |
| RP | RETURN PANEL (CEILING) | AS SHOWN | AS SHOWN | AS SHOWN | TITUS PAR-AA | 1/2*, 3, 4, 13 |
| LD-1 | LINEAR DIFFUSER (1-SLOT) | AS SHOWN | AS SHOWN | AS SHOWN | TITUS LL-1 | 2, 4, 22 |

<u>NOTES</u>

1. LAY-IN CEILING CONSTRUCTION. (+)

- 2. SURFACE MOUNTING ON CEILING OR EXPOSED. (+)
- 3. WHITE ENAMEL FINISH. 4. ALUMINUM CONSTRUCTION.
- 5. OPPOSED BLADE VOLUME DAMPER. 6. HORIZONTAL FACE BARS WITH DEFLECTION.
- 1. YERTICAL FACE BARS. 8. EXPOSED FACE VANES
- 9. 4-WAY DIRECTIONAL THROW (UNLESS OTHERWISE SHOWN)
- 10. NON-DUCTED
- 11. SQUARE NECK CONNECTION. 12. ROUND NECK CONNECTION
- 13. NECK TYPE AS SHOWN ON DRAWINGS.
- 14. FULL RADIUS THROW 15. DOUBLE DEFLECTION THROW.

- 16. VERTICAL TO HORIZONTAL AIR AIR PATTERN ADJUSTMENT
- 17. FLUSH MOUNT- FLANGE AS REQUIRED.
- 18. BIRD SCREEN 19. 45% NET AREA MIN. 20. FILTER TYPE REGISTER
- SUPPLY W/ FILTER 21. PROVIDE W/ SPARE FILTER.
- 22. LINEAR DIFFUSER W/ FACTORY PLENUM & JET THROW.
- 23. LINEAR DIFFUSER W/ INSULATED DUCT PLENUM
- * CONTRACTOR SHALL VERIFY CEILING CONSTRUCTION TYPE PRIOR TO PURCHASING AND INSTALLATION. REFER TO ARCHITECTUAL DRAWINGS AND REFLECTED CEILING PLANS FOR CEILING TYPES.

| | | | | | | FA | N S | CH | ΞD | UL | E | |
|--------------|-----------|------------|--------------|-----|-----------|------|---------------|-------------|-------|---------|----------------------|--------------|
| TARK TARK | MANUF | MODEL | TYPE | CFM | SP H20 | RPM | HP (WATTS) | ELE AMPS | CTRIC | AL L | REMARKS | SERVING |
| EF-1 | GREENHECK | CSP-A19Ø | INLINE | 100 | Ø.3 | 1400 | (100) | 1.10 | 120 | 1 | 1,5,6,11,14,16,20,21 | JANITOR . |
| EF-2 | GREENHECK | CSP-ATIØ | INLINE | 500 | Ø.4 | 1080 | (325) | 4.40 | 120 | 1 | 1,5,6,11,14,16,20,21 | WOMEN'S |
| EF-3 | GREENHECK | CSP-A510 | INLINE | 375 | Ø.4 | 1070 | (217) | 3.11 | 12Ø | 1 | 1,5,6,11,14,16,20,21 | MEN'S |
| EF-4 | GREENHECK | 51-8-44Ø-D | DIRECT DRIVE | 25Ø | Ø.2 | 1550 | 1/25 | - | 120 | 1 | 1,2,4,8,10,16,20,23 | TICKET BOOTH |
| - | - | - | - | - | - | - | - | - | - | - | - | - |

PROVIDE WITH DISCONNECT SWITCH

PROVIDE WITH WALL MOUNTED "ON-OFF" SWITCH.

PROVIDE WITH SPEED CONTROLLER, FAN MOUNTED UNLESS SHOWN OTHERWISE. 4... FAN SHALL BE THERMOSTATICALLY CONTROLLED BY WALL MOUNTED THERMOSTAT

5. FAN SHALL OPERATE CONTINUOUSLY. PROVIDE W/ STARTER (WEATHERPROOF AS REQUIRED)

PROVIDE FAN SPEED CONTROLLER MOUNTED IN WEATHERPROOF NEMA ENCLOSURE

8. FAN TO BE PROVIDED WITH TIME CLOCK FOR OPERATION. PARAGON DIGITAL MODEL WITH 1-DAY PROGRAMMING.

9. INTERLOCK W/ MOTORIZED DAMPER 10. FAN TO BE ON EMERGENCY GENERATOR

PROVIDE W/ BACKDRAFT DAMPER. (ALUMINUM)

12. PROVIDE W/ HINGED CURB 13. PROVIDE W/ FACTORY SUPPLIED, INSULATED CURB SUITABLE FOR FAN. CURB SLOPED AS

14. PROVIDE W/ FACTORY SUPPLIED, ROOF CAP DISCHARGE.

15. PROVIDE W/ FACTORY SUPPLIED, WALL DISCHARGE.

16. ALL ALUM. CONSTRUCTION

17. PROVIDE W/ STAINLESS STEEL SHAFT. I 18. PROVIDE W/ EXTERNAL INLET VANE DAMPER.

20. PROVIDE W/ WALL/CEILING MOUNTING BRACKET & SEPARATE SAFETY CHAIN. 21. PROVIDE WITH YIBRATION HANGERS

22. PROVIDE W/ SPARE SET OF BELTS.

23. PROVIDE W/ SAFETY ENCLOSURE

24. PROVIDE W/ BIRD SCREEN
25. FAN CONTROLLED BY ARMSTRONG CARBON MONOXIDE MONITORING SYSTEM.
26. FAN INTERLOCKED WITH KITCHEN EXHAUST HOOD CONTROL SYSTEM
27. PROVIDE WITH DIRECT GAS FIRED HEATER W/ MODULATING GAS VALVE, AND

DUCT SENSOR

28. PROVIDE W/ FILTER RACKS & WASHABLE FILTERS.

29. SEE CONTROL SEQUENCE FOR ADDITIONAL CONTROL REQUIREMENTS. 30. PROVIDE W/ MOTORIZED DAMPER.

HURST & ASSOCIATES CONSULTING ENGINEERS 308 HILLWOOD AVE. FALLS CHURCH, VA. 22046 (703) 534-7872

NOTE:
THE CONSTRUCTION OF THIS PROJECT REQUIRES THE CONTRACTOR TO COORDINATE WORK SHOWN ON THIS DRAWING WITH THAT OF ALL OTHER TRADES. IN ADDITION, ALL PIPING, CONDUITS, DUCTWORK, ETC., ARE TO BE INSTALLED WITHIN THE JOISTS / GIRDERS AND TO MAINTAIN THE MINIMM REQUIRED CLEARANCES, WON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES RESULTING FROM CONFLICTS WITH OTHER TRADES AND WORK. IN THE EVENT OF ANY CONFLICTS THE CONTRACTOR SHALL IMPEDIATELY NOTIFY THE OWNER OR THEIR REPRESENTATIVE IN WRITING FOR CLARIFICATION BEFORE PROCEEDING.

GTMARCHITECTS 7735 OLD GEORGETOWN ROAD SUITE 700 BETHESDA, MD 20814 (240)333-2000 (240)333-2001 FAX

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REVISIONS:

SEAL:

DRAWN BY:

CHECKED BY:

PROJECT NO.

SCALE:

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NONE

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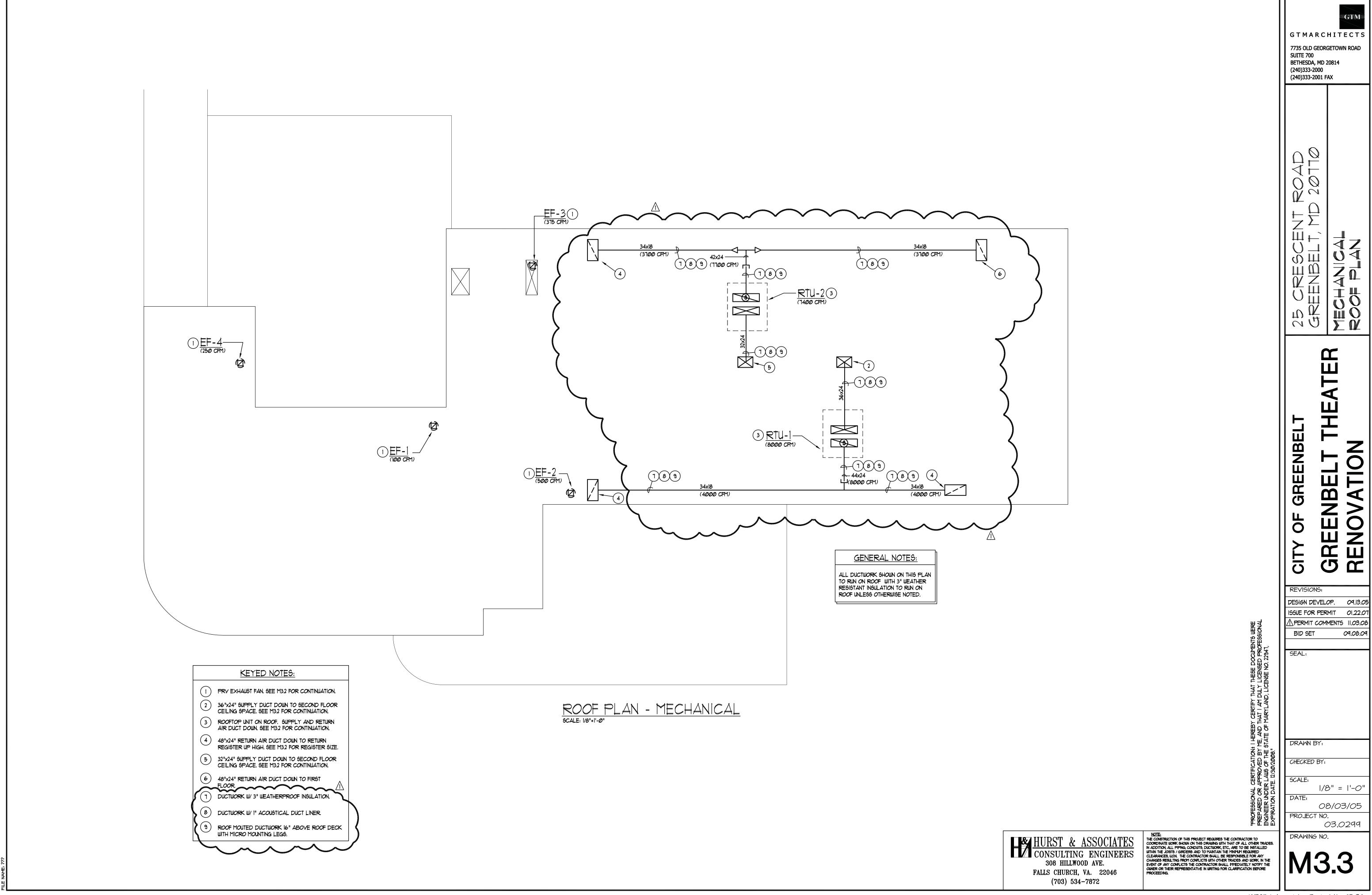
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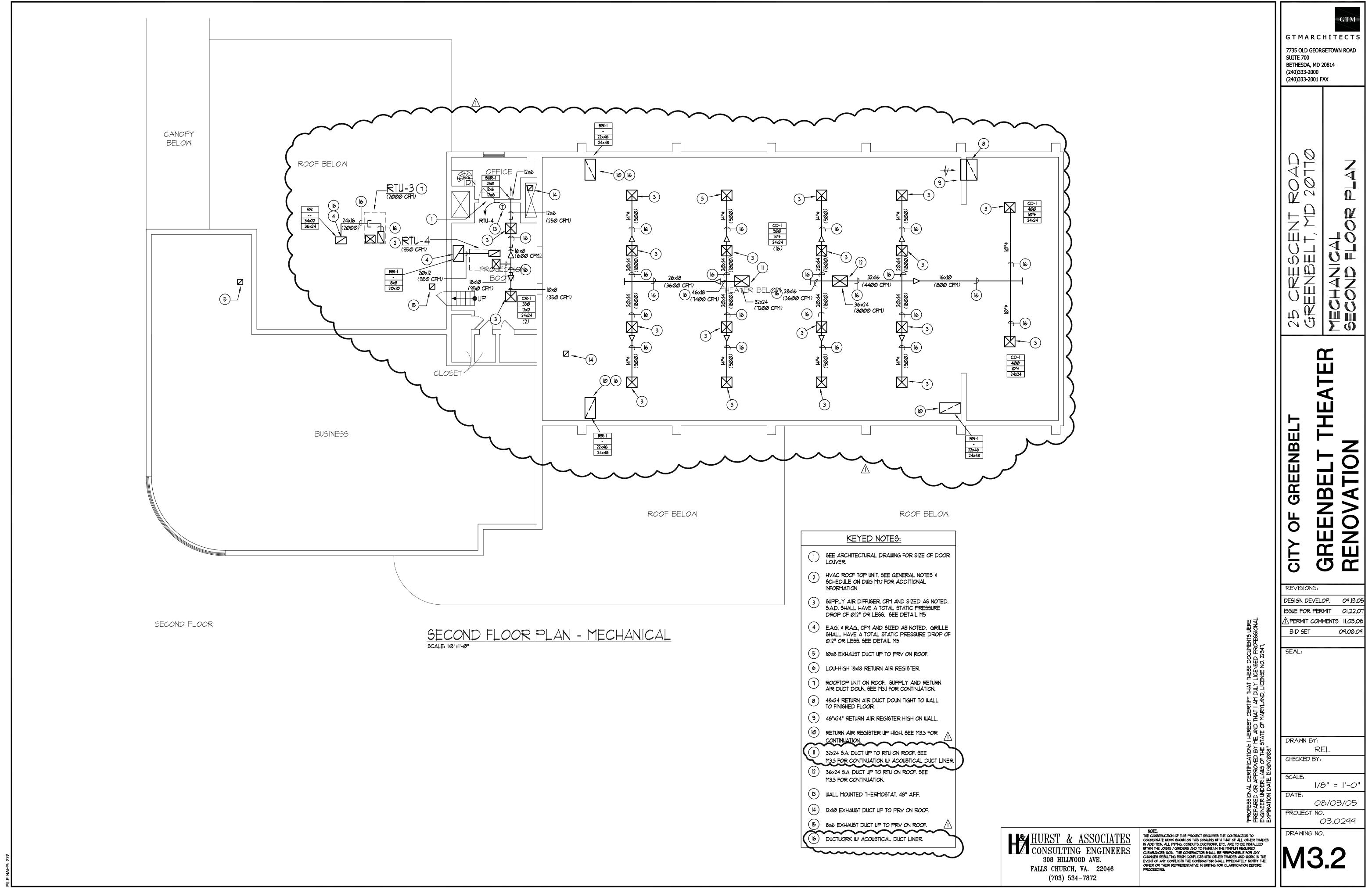
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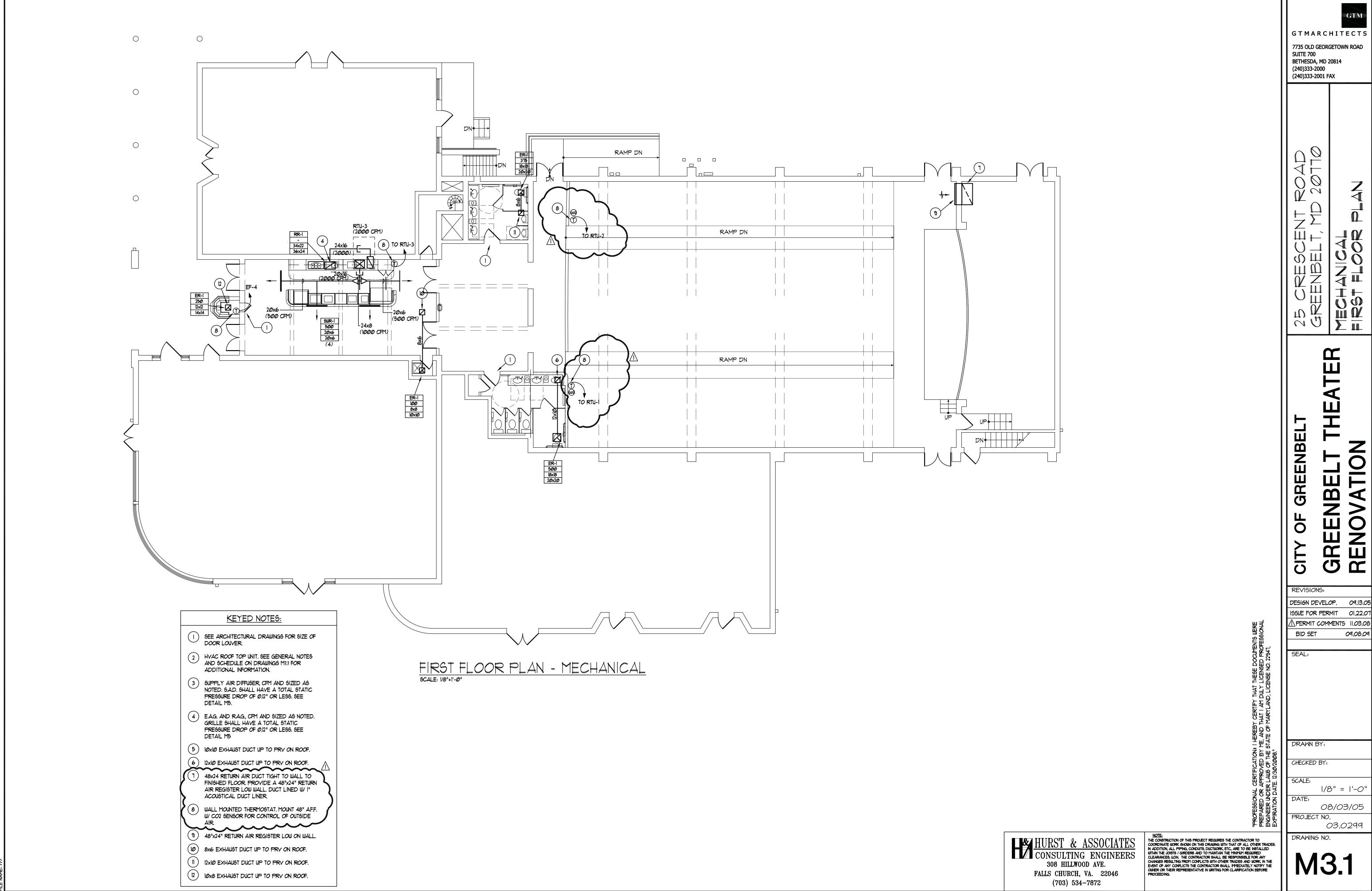
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<u>||</u>PERMIT COMMENTS ||.03.08

PERSETCOMMENTS OF SUBJECT







GENERAL MECHANICAL NOTES

). THE MECHANICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF STATE AND LOCAL CODES AND APPLICABLE JURISDICTIONAL BODIES.

2). THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS AND PAY FOR ALL PERMITS, FEES, CHARGES AND INSPECTION REQUIRED, AS WELL AS APPLICABLE HAULING, RIGGING AND TRANSPORTATION CHARGES APPLICABLE TO HIS

3). THE PROJECT SHALL BE BID ON THE BASIS OF SPECIFIED PRODUCT(S) WHICH ESTABLISH MINIMUM QUALITY REQUIREMENTS. WHERE MORE THAN ONE PRODUCT NAME IS INDICATED, BIDS SHALL BE BASED ON ONE OF THE NAMED PRODUCTS. ALL MECHANICAL EQUIPMENT SHOWN ON CONTRACT DOCUMENTS SHALL BE NEW, SHALL BE UL LISTED AND SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.

A). WHERE USE OF AN "ACCEPTABLE EQUAL" PRODUCT REQUIRES CHANGES TO THE BASE BID DESIGN IN ORDER TO INCORPORATE THE PRODUCT INTO THE PROJECT, THE CONTRACTOR SHALL SUBMIT A LAYOUT SHOWING ALL CHANGES TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING AND MECHANICAL REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER. THE LAYOUT SHALL ACCOMPANY THE PRODUCT SUBMITTAL DATA. COST OF CHANGES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

B). SUBSTITUTIONS FOR "ACCEPTABLE EQUAL" PRODUCTS NOT SPECIFIED WILL BE CONSIDERED WHEN INCLUDED WITH SUBMISSION OF THE BID AND SHALL BE SUBJECT TO ACCEPTANCE BY THE ENGINEER. PROPOSALS FOR SUBSTITUTIONS SHALL INCLUDE, BUT NOT LIMITED TO, (1) ANY CREDIT OR ADDED COST. (2) PRODUCT IDENTIFICATION (3) CODE COMPLIANCE (4) REFERENCED STANDARD COMPLIANCE AND (5) DESCRIPTION OF ALL CHANGES INCLUDING ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL REQUIRED TO INCORPORATE SUBSTITUTED PRODUCT INTO THE PROJECT. THE OWNER RESERVES THE RIGHT TO REJECT PROPOSED SUBSTITUTIONS.

C). WHERE "OR EQUAL" PRODUCTS ARE INDICATED, THE BIDDER SHALL SUBMIT A LIST OF PROPOSED EQUAL SUBSTITUTE PRODUCTS WITH THE BID. THE LIST SHALL INCLUDE ADEQUATE SUPPORTING INFORMATION AS PROOF OF EQUALITY IN ORDER TO BE CONSIDERED ACCEPTABLE. NO LATER SUBSTITUTES WILL BE CONSIDERED.

D). SUBSTITUTION SUBMISSIONS OF SPECIFIED EQUAL PRODUCTS SHALL PROVIDE THE SAME GUARANTEE AS SPECIFIED FOR BASE BID PRODUCTS.

SUBSTITUTIONS & SUBMISSION OF SPECIFIED EQUAL PRODUCTS POLICY: ALL EQUIPMENT AND MATERIAL SUBSTITUTIONS NOT SPECIFICALLY APPROVED IN THESE DRAWINGS SHALL REQUIRE THE

FOLLOWING TO BE CONSIDERED SUBSTITUTIONS MUST BE APPROVED IN WRITING BY THE OWNER BEFORE SUBMISSION FOR ENGINEERING REVIEW.

SUBMISSION SHALL BE AS PER SPECIFICATION AND AS CALLED FOR BELOW.

SUBSTITUTIONS & APPROVED EQUALS MUST BE PROVIDED WITH A TABULATION OF ALL PERTINENT INFORMATION ASSOCIATED WITH THE EQUIPMENT OR MATERIAL. TABULATION SHALL SHOW SPECIFIED MATERIAL OR EQUIPMENT CHARACTERISTICS IN COMPARISON WITH PROPOSED EQUIPMENT. INFORMATION SHALL INCLUDE, BUT NOT LIMITED TO ALL ELECTRICAL CHARACTERISTICS. PHYSICAL SIZE, OPERATING CAPACITIES AND PERFORMANCE, COMPLIANCE WITH ALL CODE AND DESIGN REQUIREMENTS, COST SAVINGS TO OWNER, AS APPLICABLE, ETC.

CONTRACTOR SHALL PROVIDE WRITTEN STATEMENT AS TO CONTRACTOR GUARANTEEING, AND WARRANTING, SUBSTITUTION TO COMPLY WITH ALL DESIGN CRITERIA AND THEIR ACCEPTANCE OF SOLE RESPONSIBILITY FOR ANY COST ASSOCIATED WITH ANY TRADES AS A RESULT OF THE SUBSTITUTION.

REVIEW OF ANY SUBSTITUTION OR APPROVED EQUAL BY ENGINEER SHALL BE FOR GENERAL COMPLIANCE ONLY. CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR SUBSTITUTION'S COMPLIANCE WITH DESIGN REQUIREMENTS OF SPECIFIED EQUIPMENT OR MATERIAL, INCLUDING ANY AND ALL COSTS TO OTHER TRADES AND REQUIRED MODIFICATIONS

SUBSTITUTIONS SUBMITTED WITHOUT THE REQUIRED INFORMATION LISTED ABOVE SHALL NOT BE REVIEWED AND SHALL BE RETURNED TO THE CONTRACTOR WITH THE CONTRACTOR BEARING ALL COSTS ASSOCIATED WITH ANY DELAY RESULTING.

4). THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS FOR POINTS OF CONNECTIONS, CAPACITIES AND ELEVATIONS OF SYSTEMS, IN ALL AREAS AFFECTED BY THE PROJECT, CUT, PATCH, REPAIR AND/OR REPLACE ALL MATERIALS REQUIRED TO INCORPORATE WORK, FINISHES DAMAGED AS A RESULT OF WORK SHALL BE REPAIRED TO MATCH APPROPRIATE ADJACENT FINISHES. FILL VOIDS AROUND DUCTWORK PENETRATING WALLS WITH FIRE STOPPING MATERIAL (THERMA-FIBER OR EQUAL)

5). MECHANICAL EQUIPMENT AND PRODUCTS SHALL BE LISTED AND/OR LABELED BY AN APPROVED TESTING OR INSPECTION AGENCY IN ACCORDANCE WITH LOCAL AND GOVERNING CODE REQUIREMENTS.

6). THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF WORK INCLUDED IN THE PROJECT. DO NOT SCALE THE DRAWING. THE CONTRACTOR SHALL ESTABLISH FINAL DIMENSIONS FROM FIELD MEASUREMENTS PRIOR TO STARTING WORK. THE WORD "PROVIDE" AS USED IN THE PROJECT SHALL BE DEFINED AS "FURNISH AND INSTALL".

<u>1). MECHANICAL WORK SHALL BE COORDINATED WITH THE WORK OF ALL OTHER TRADES PRIOR TO</u> NSTALLATION TO AVOID CONFLICTS AND ALLOCATE SPACE REQUIREMENTS

3). EQUIPMENT AND PRODUCT MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS FOR INSTALLATION AND OPERATION SHALL BE FOLLOWED IN PERFORMING MECHANICAL WORK, UNLESS OTHERWISE INDICATED OR DIRECTED. MATERIALS AND METHODS USED IN THE WORK SHALL BE COMPATIBLE WITH BUILDING CONDITIONS AND COMPLY WITH THE BUILDING CODE REQUIREMENTS, WHICH SHALL BE THE BASIS FOR MINIMUM PRODUCT QUALITY. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER BY SKILLED WORKMEN EXPERIENCED IN THEIR TRADE. THE WORK SHALL BE SUBJECT TO THE ACCEPTANCE OF THE OWNER OR THE DULY AUTHORIZED REPRESENTATIVE.

9). DUCTWORK SHALL BE FABRICATED OF GALVANIZED SHEET METAL WITH CONSTRUCTION AND INSTALLATION IN ACCORDANCE WITH SMACNA STANDARDS AND SYSTEM REQUIREMENTS, SHEETMETAL GAGES SHALL CONFORM TO THE MECHANICAL CODE, ASHRAE STANDARDS AND UL LISTED FIRE RESISTANCE DIRECTORY REQUIREMENTS AS APPLICABLE. DUCTWORK SIZES SHOWN ARE NET CLEAR INSIDE DIMENSIONS, FABRICATE SHEETMETAL FOR INTERNALLY LINED DUCTS TO ALLOW FOR THICKNESS OF INSULATION AND MAINTAIN NET CLEAR DIMENSIONS, CONTRACTOR SHALL VERIFY ACTUAL AVAILABLE DUCT SPACE PRIOR TO FABRICATION AND INSTALLATION OF DUCTWORK SHOULD A CONFLICT OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER BEFORE CONTINUING. ALL RECTANGULAR DUCTWORK ELBOWS SHALL BE PROVIDED WITH TURNING VANES.

10). DUCTWORK SHALL BE SEALED WITH AN APPROVED DUCT MASTIC OR LIQUID SEALANT AS MANUFACTURED BY UNITED MCGILL CORP. OR APPROVED EQUAL. DUCT SYSTEM LEAKAGE SHALL CONFORM WITH SMACNA "HYAC DUCT LEAKAGE TEST MANUAL '

FOR PRIMARY AIR: CLASS 3" W.G. SEAL CLASS B, LEAKAGE CLASS 12 FOR RECTANGULAR DUCTS AND LEAKAGE CLASS 6 FOR ROUND DUCTS FOR SECONDARY AIR: CLASS I "W.G. SEAL CLASS "C", LEAKAGE CLASS 24 FOR RECTANGULAR DUCTS AND

CLASS 12 FOR ROUND DUCTWORK.

FOR DUCTWORK NOT USED.

11). ALL DUCTWORK SHALL BE FABRICATED FROM FIELD CONFIRMED CONDITIONS. NO ALLOWANCE PERMITTED

12). PROVIDE FIRE AND SMOKE DAMPERS IN HYAC AIR DISTRIBUTION SYSTEMS THAT PENETRATE FIRE OR SMOKE RATED ASSEMBLIES IN ACCORDANCE WITH THE BUILDING AND MECHANICAL CODES, DAMPERS SHALL BE IN ALL SUPPLY / RETURN / EXHAUST / OUTSIDE AIR DUCTS THAT PENETRATE RATED ASSEMBLIES IN ADDITION TO ALL SECONDARY DAMPERS FOR CEILING / WALL AND FLOOR MOUNTED AIR DEVICES. COORDINATE SPECIFIC FIRE RESISTIVE CONSTRUCTION REQUIREMENTS WITH THE FIRE RATED ASSEMBLIES INDICATED ON ARCHITECTURAL DRAWINGS. THROUGH PENETRATIONS FIRESTOP SYSTEMS SHALL CONFORM TO UL LISTED FIRE RESISTANCE DIRECTORY OR OTHER METHODS ACCEPTABLE TO LOCAL GOVERNING CODE AUTHORITIES.

13). PROVIDE ALL NECESSARY FOUNDATIONS, SUPPORTS, PADS AND BASES AS REQUIRED FOR MECHANICAL EQUIPMENT, PIPING AND DUCTWORK AS PER INTERNATIONAL BUILDING AND MECHANICAL CODE REQUIREMENTS. INSTALL EQUIPMENT, PIPING AND DUCTWORK SO AS TO BE FREE FROM OBJECTIONABLE NOISE AND YIBRATIONS. CONTRACTOR SHALL COORDINATE WORK WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS PRIOR TO ACTUAL WORK.

14). ELECTRIC MOTORS FOR MECHANICAL EQUIPMENT SHALL BE PROVIDED UNDER MECHANICAL WORK UNLESS OTHERWISE NOTED. ALL MOTORS SHALL BE NEMA STANDARD DESIGN FOR QUIET OPERATION AND SIZED TO PROPERLY OPERATE EQUIPMENT AT RATED LOAD. MOTORS WITH BELT DRIVES SHALL BE PROVIDED WITH ADJUSTABLE PULLEYS AND SHAFTS. ELECTRICAL POWER CONNECTIONS FOR MECHANICAL EQUIPMENT SHALL BE PROVIDED UNDER ELECTRICAL WORK.

15). MOTOR STARTERS, RELAYS AND CONTACTORS SHALL BE FURNISHED UNDER THE MECHANICAL WORK AND INSTALLED AND POWERED UNDER THE ELECTRICAL WORK STARTERS RELAYS AND CONTACTORS SHALL BE COMPLETE WITH LUGS SIZED FOR SPECIFIED CONDUCTORS AND INCLUDE REQUIRED ACCESSORIES (I.E.: START-STOP PUSH BUTTON PILOT LIGHTS, H.O.A SWITCH, AUXILIARY CONTACTS AND OVERLOAD PROTECTION), GENERAL PURPOSE NEMA TYPE I ENCLOSURES INDOORS, NEMA TYPE 3R ENCLOSURES OUTDOORS, SINGLE PHASE MOTOR STARTERS SHALL BE MANUAL TYPE WITH OVERLOAD PROTECTION, UNLESS OTHERWISE NOTED. THREE PHASE STARTERS SHALL BE MAGNETIC FULL VOLTAGE, NON-REVERSING, UNLESS OTHERWISE NOTED. STARTERS FOR MECHANICAL SYSTEMS SHALL BE AS MANUFACTURED BY SQUARE-D, GENERAL ELECTRIC OR CUTLER HAMMER. STARTERS SHALL CONFORM TO NEMA STANDARDS AND NATIONAL ELECTRIC CODE (N.E.C.) REQUIREMENTS, STARTER CONTROL AND INTERLOCK WIRING SHALL BE PROVIDED UNDER THE MECHANICAL WORK

16). DUCT SMOKE DETECTORS SHALL BE INSTALLED IN ALL AIR DISTRIBUTION SYSTEMS WITH A DESIGN CAPACITY OF 2000 CFM OR GREATER IN ACCORDANCE TO THE MECHANICAL CODE AND NATIONAL FIRE PREVENTION CODE NEPA 12. DUCT SMOKE DETECTORS SHALL BE "DUAL CONTACTS" TYPE (FOR TIE-IN TO FIRE ALARM SYSTEM AND FOR FAN SHUT-DOWN), COMPLETE WITH SAMPLING TUBE, REMOTE RESET, REMOTE PILOT INDICATOR (FOR CONCEALED APPLICATIONS), UL LISTED FOR INTENDED USE AND COMPLETELY COMPATIBLE WITH FIRE ALARM SYSTEM. DUCT SMOKE DETECTORS SHALL BE PROVIDED AND INSTALLED UNDER THE MECHANICAL WORK AND WIRED AND POWERED UNDER THE ELECTRICAL WORK. PROVIDE SMOKE DAMPER AT ALL SMOKE BARRIER PENETRATION AS PER BUILDING CODE.

1). PROVIDE AUTOMATIC TEMPERATURE CONTROL SYSTEM(S) FOR HYAC EQUIPMENT UNDER MECHANICAL WORK. CONTROL DEVICES SHALL BE PROVIDED BY UNIT MANUFACTURER UNLESS OTHERWISE NOTED. HVAC EQUIPMENT NOT PROVIDED WITH CONTROL DEVICES SHALL BE PROVIDED WITH DEVICES AS MANUFACTURED BY "TRANE" OR APPROVED EQUAL. DEVICE(S) SHALL BE FULLY COMPATIBLE AND SUITABLE FOR INTENDED USE. CONTROL WIRING SHALL BE PROVIDED IN ACCORDANCE WITH THE N.E.C. FOR 24 YOLT CONTROL SYSTEM(S). WIRING SHALL BE A MINIMUM 22 AWG, COLOR CODED AND INSTALLED IN CONDUIT WHERE SUBJECT TO PHYSICAL DAMAGE OR WHERE REQUIRED TO AVOID PLENUM SPACES, EXTEND ALL LOW VOLTAGE WIRING UNBROKEN BETWEEN EACH CONTROL DEVICE AND EQUIPMENT TERMINAL STRIP, INSTALLATION OF CONTROL SYSTEM(S), WIRING AND DEVICES SHALL BE BY A CERTIFIED CONTROLS CONTRACTOR WITH A MINIMUM OF FIVE (5) YEARS EXPERIENCE IN THE INSTALLATION AND SERVICING OF CONTROLS.

18), PIPING SHOWN IS SCHEMATIC AND DOES NOT INDICATE EVERY OFFSET, ELBOW, UNION, YALVE, TRAP, ACCESS PANEL ETC., THAT IS REQUIRED FOR A COMPLETE WORKING SYSTEM. PROVIDE ITEMS AND FITTINGS THAT ARE REQUIRED TO INSTALL THE PIPING SYSTEM WITHIN THE SPACE PROVIDED AND THAT ARE REQUIRED FOR A COMPLETE SYSTEM. PIPING SHALL BE PROPERLY SECURED IN ACCORDANCE WITH "MSS" STANDARD SP-69. PROVIDE PIPE SADDLES AND HIGH DENSITY BLOCKING AT HANGERS FOR INSULATED PIPING.

19), PROVIDE REFRIGERANT PIPING IN ACCORDANCE THE THE EQUIPMENT MANUFACTURER'S REQUIREMENTS, VERIFY LINE SIZES FOR EQUIPMENT USED, PIPING SHALL BE COPPER TYPE "ACR" WITH FORGED OR WROUGHT COPPER FITTINGS CONFORMING TO ASTM B280 AND COPPER DEVELOPMENT ASSOCIATION STANDARDS, JOINTS SHALL BE MADE WITH SILVER SOLDER SILFOS OR APPROVED EQUAL. REFRIGERANT PIPING JOINTS IN CONCEALED SPACES ARE NOT ACCEPTABLE. 20), CONDENSATE DRAIN PIPING SHALL BE COPPER TYPE "M" WITH LEAD-FREE (95/5) SOLDERED JOINTS, PIPING AND FITTINGS SHALL CONFORM TO ASTM B88 AND THE COPPER DEVELOPMENT ASSOCIATION STANDARDS.

21). INSULATION MATERIALS SHALL BE "CERTAIN-TEED" OR APPROVED EQUAL. INSULATION MATERIALS SHALL HAVE A FLAME SPREAD RATING NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING OF NOT MORE THAN 50, PROVIDE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS FOLLOWS:

A), SUPPLY/RETURN & O.A. AIR DUCTS (CONCEALED): INSULATE WITH NOMINAL TWO (2) INCH THICK TYPE T5 STANDARD DUCTURAP WITH "F6K" FACING, VAPOR BARRIER MINIMUM 1-1/2" INSTALLED THICKNESS WITH 5.6 'R' VALUE.

B), SUPPLY/RETURN & O.A. AIR DUCTS (INTERIOR EXPOSED WHERE INDICATED): INSULATE WITH ONE (1) INCH THICK, TYPE 200 "ULTRA-LITE" ACOUSTICAL DUCT LINER WITH 100% ADHESIVE COVERAGE AND MECHANICAL FASTENERS. MINIMUM INSTALLED 'R' VALUE OF 3.7.

C). SUPPLY/RETURN & O.A. AIR DUCTS (CONCEALED IN ATTIC/CRAWL/ROOF CEILING: SPACE): INSULATE WITH NOMINAL THREE (3) INCH THICK TYPE 15 STANDARD DUCT WRAP WITH "FSK" FACING, VAPOR BARRIER MINIMUM 2-1/4" INSTALLED THICKNESS WITH 85 'R' VALUE.

D). SUPPLY/RETURN/EXHAUST/OUTSIDE AIR DUCTS (EXPOSED TO WEATHER CONDITIONS): INSULATE DUCTWORK EXTERIOR WITH SEMI-RIGID FIBERGLASS BOARD INSULATION, TYPE IB300, 3.0 LB5/CUFT DENSITY, MINIMUM 2" INSTALLED THICKNESS WITH 8.5 'R' VALUE. PROVIDE WEATHERPROOF FINISH AS MANUFACTURED BY FOSTER'S "MONOLAR" 60-95 COATINGS (MIN. OF 3 COATS) OR APPROVED EQUAL.

A). CONDENSATE DRAIN: INSULATE WITH CLOSED CELL FLEXIBLE ELASTOMETRIC PIPE INSULATION, 1/2" THICK. (DO NOT INGULATE CONDENSATE DRAIN PIPING BELOW GRADE OR LOCATED OUTSIDE)

B). <u>REFRIGERANT PIPING (SUCTION LINE)</u>: INSULATE PIPING WITH "CLOSED-CELL" FLEXIBLE ELASTOMERIC INSULATION, 1/2" THICK PROVIDE WITH WEATHER RESISTANT FINISH ON INSULATION EXPOSED TO OUTDOORS. INSULATION SHALL BE ARMSTRONG, HALSTEAD OR APPROVED EQUAL.

22). INSTRUCTION AND IDENTIFICATION: WRITTEN INSTRUCTIONS IN A SINGLE BINDER DESCRIBING THE PROPER OPERATION AND MAINTENANCE OF EQUIPMENT AND SYSTEMS SHALL BE PROVIDED TO THE OWNER AT THE COMPLETION OF THE WORK. THE CONTRACTOR SHALL DEMONSTRATE AND INSTRUCT THE OPERATION OF SYSTEMS TO THE OUNER'S REPRESENTATIVE. ALL VALVES, CONTROLS, ETC., SHALL BE PERMANENTLY IDENTIFIED AND LABELED WITH METAL TAGS OR ENGRAVED NAMEPLATES AS APPLICABLE. COORDINATE WITH HVAC ZONE SCHEDULE.

23). UPON COMPLETION OF THE INSTALLATION, AIR SYSTEMS SHALL BE ADJUSTED AND BALANCED TO PROVIDE THE AIR QUANTITIES INDICATED. PROVIDE VOLUME DAMPERS, SPLITTER DAMPERS AND/OR VOLUME EXTRACTORS AS INDICATED. OR REQUIRED FOR BALANCING. BALANCING WORK SHALL BE PERFORMED BY A CERTIFIED BALANCING CONTRACTOR WHO IS A MEMBER IN GOOD STANDING OF AABC, NEBB OR SMACNA. BALANCING WORK SHALL BE IN COMPLIANCE WITH THE STANDARD PROCEDURE MANUAL PUBLISHED BY TESTING AND BALANCING ORGANIZATION AFFILIATED WITH THE BALANCING CONTRACTOR, SUBMIT APPROPRIATE FIELD DATA ON STANDARD FORMS OF T & B ORGANIZATION IN ACCORDANCE WITH STANDARD PROCEDURES, CONTRACTOR TO PROVIDE OWNER W/ 5 COPIES OF REPORT.

24). PROJECT PREMISES SHALL BE THOROUGHLY CLEANED AND READY FOR OCCUPANCY INCLUDING ALL FINISHES OF EQUIPMENT PROVIDED AS PART OF THE CONTRACTORS WORK, PROVIDE ONE (1) NEW SET OF CLEAN AIR FILTERS FOR PROJECT CLOSE OUT.

25), THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER AND SHALL REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE OWNER ANY PART THEREOF WHICH MAY BECOME DEFECTIVE DURING THE PERIOD OF GUARANTEE, ORDINARY WEAR AND TEAR EXCEPTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PAY FOR ANY DAMAGES RESULTING FROM OR CAUSED BY DEFECTS IN HIS/HER WORK.

26), ALL GAS FIRED APPLIANCE VENTS USED FOR THE PRODUCTS OF COMBUSTION FOR MECHANICAL EQUIPMENT SHALL BE POSITIVE PRESSURE, INSULATED, STAINLESS STEEL TYPE, AGA CERTIFIED, UL LISTED, CONTRACTOR SHALL COORDINATE SIZE, ROUTING, INSTALLATION AND CONNECTION SIZE TO APPLIANCE PRIOR TO PURCHASING, FABRICATION AND

27). PROVIDE ACCESS DOORS IN ALL GYPSUM BOARD CEILINGS, WALL AND FLOOR ASSEMBLIES REQUIRED FOR SERVICING/ACCESS OF MECHANICAL EQUIPMENT AND ASSOCIATED DEVICES. ACCESS DOOR SHALL BE SUITABLE FOR USE IN ASSEMBLY INSTALLED IN AND SHALL MATCH FIRE RATING (IF APPLICABLE) OF ASSEMBLY.

28). REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR FINAL LOCATION OF AIR DISTRIBUTION DEVICES SHOWN ON MECHANICAL DRAWINGS. CONTRACTOR SHALL NOTIFY THE ENGINEER SHOULD A CONFLICT OCCUR.

GENERAL EQUIPMENT INSTALLATION NOTES

ALL FIRE AND SMOKE DAMPERS TO BE U.L. LISTED AND LABELED AND IN COMPLIANCE WITH INTERNATIONAL MECHANICAL CODE.

PROVIDE FLUSH ACCESS DOORS FOR ALL DAMPERS, VALVES AND OTHER CONCEALED MECHANICAL EQUIPMENT REQUIRING ADJUSTMENT AND INSPECTION. DOORS SHALL BE FINISHED TO SURROUNDING FINISHES OR AS REQUIRED BY ARCHITECTURAL DRAWINGS. ACCESS DOORS TO HAVE U.L. FIRE RATING EQUAL TO SURROUNDING SURFACES.

PROVIDE IDENTIFICATION AND LABELS FOR ALL ACCESS DOORS IN DUCTWORK TO ACCESS FIRE/SMOKE

NO FLEX DUCT ALLOWED ABOVE DRYWALL CEILING. ALL DUCTWORK TO BE GALYANIZED STEEL SIZE AS PER SMACNA & IBC. MAX FLEX DUCT LENGTH 6'-0".

· DUCTWORK LAYOUT IS TO BE CAREFULLY COORDINATED WITH OTHER TRADES INCLUDING STRUCTURAL, PLUMBING, ELECTRICAL AND SPRINKLER DUCTWORK LAYOUT TO BE FABRICATED FROM FIELD CONFIRMED DIMENSIONS.

ABBREVIATIONS (ALL SYMBOLS MAY NOT APPEAR ON PROJECT DRAWINGS) (ALL ABBREVIATIONS MAY NOT APPEAR ON PROJECT DWGS) <u>DUCTWORK</u> AIR CONDITIONING UNIT ACCU DUCTWORK - SINGLE LINE AD 12" imes 6" $\stackrel{1}{\leftarrow}$ DUCTWORK - FIRST DIMENSION IS SIDE SHOWN ACT REFRIGERANT SUCTION PIPING ASD ACOUSTICALLY LINED DUCTWORK ATC (NET CLEAR INSIDE DIMENSIONS) DOMESTIC COLD WATER PIPING PUMPED CONDENSATE DUCTWORK EXPOSED TO WEATHER - PROVIDE BTUH CFM EXTERNAL INSULATION WITH WEATHERPROOF COATING \longrightarrow SHUT OFF YALVE CONY SUPPLY DUCT SECTION MODULATING CONTROL YALVE - 2 WAY CU (FIRST DIMENSION (12") IS HORIZONTAL SIDE) MODULATING CONTROL VALVE - 3 WAY DIA STAINER DISCH RETURN AIR / OUTSIDE AIR OR EXHAUST AIR DUCT DN (NEGATIVE PRESSURE) BUTTERFLY VALVE DWG CHECK YALVE DB ' FLEXIBLE BRANCH DUCT EFF BALANCING YALVE EAT FLEXIBLE DUCT CONNECTOR PRESSURE REDUCING VALVE EAT (AT FAN / EQUIPMENT CONNECTIONS) EΑ **──** ESP DUCT TURNING DOWN PRESSURE RELIEF VALVE (E) ECH DUCT TURNING UP THERMOMETER EDH CEILING DIFFUSER I= LAY-IN 2 = SURFACE PRESSURE GAUGE CEILING DIFFUSER (ROUND FACE) EWH C.D.-3 3 = EXPOSED OR CLG. MOUNTED PIPE CONNECTION - TOP OF PIPE FD RAP PERFORATED RETURN AIR PANEL (24"x24"-NON DUCTED) PIPE CONNECTION - BOTTOM OF PIPE C.R-1 CEILING SUPPLY REGISTER PIPE CONNECTION - SIDE OF PIPE RETURN REGISTER (DUCTED) \longrightarrow PIPE UP, PIPE DOWN H/AC (L.W.=LOW WALL± H.W.=HIGH WALL) H.O.A. BALL VALVE TG.-I G --- TRANSFER GRILLE HPIS HPOS (ONE ON EACH WALL W/ DUCT) BALANCE & FLOW METERING YALVE ΗP S.W.R.-1 | DEWALL REGISTER KW GATE VALVE LWT TTII--- EXHAUST REGISTER MISCELLANEOUS MCC EXISTING TO REMAIN ADJUSTABLE SPLITTER DAMPER EXISTING TO BE REMOVED MD NC VOLUME DAMPER HUMIDISTAT OBVD THERMOSTAT MOTORIZED DAMPER *0*5D REMOTE TEMPERATURE SENSOR FIRE DAMPER TIME SWITCH (PROGRAMMABLE) PDU SMOKE DAMPER SOLID STATE SPEED CONTROLLER PTAC DUCT MOUNTED SMOKE DETECTOR EXHAUST FAN MISCELLANEOUS UNIT HEATER AIR RISER DESIGNATION : * SA = SUPPLY AIR RA = RETURN AIR EWH ELECTRIC WALL HEATER EA = EXHAUST AIR RAF CONDENSATE DRAIN RISER HYAC EQUIPMENT (RE) RLH KEYED PLAN NOTE RTU CIRCULATING PUMP RLD COMBINATION FIRE / SMOKE DAMPER SA YYT BOX DESIGNATION (SEE YYT SCHEDULE) SD AIR DEVICE DESIGNATION (SEE SCHEDULE) -AIR DEVICE TYPE -AIR QUANTITY -NECK SIZE UON -FACE SIZE u.y Y.D YAY BOX DESIGNATIONS VAV**VV**T -FAN POWERED BOX SIZE

AIR COOLED CONDENSING UNIT ACCESS DOOR ACCESS PANEL ACCOUSTICAL TILE CEILING AIR HANDLING UNIT ADJUSTABLE SPLITTER DAMPER AUTOMATIC TEMPERATURE CONTROL BRAKE HORSE POWER BRITISH THERMAL UNIT CUBIC FEET PER MINUTE CONVECTOR CABINET UNIT HEATER CONDENSING UNIT DIAMETER DISCHARGE DOWN DRAWING DRY BULB TEMPERATURE EFFICENCY ENTERING AIR TEMPERATURE ENTERING WATER TEMPERATURE EXHAUST AIR EXTERNAL STATIC PRESSURE EXISTING TO REMAIN IN PLACE ELECTRIC CEILING HEATER ELECTRIC DUCT HEATER EXHAUST FAN ELECTRIC UNIT HEATER ELECTRIC WALL HEATER FIRE DAMPER GALLON PER MINUTE GALLON PER HOUR GAS FIRED UNIT HEATER FREQUENCY HEATING-AIR CONDITIONING UNIT HANDS-OFF-AUTO HEAT PUMP INDOOR SECTION HEAT PUMP OUTDOOR SECTION HORSEPOWER KILOWATT LEAVING AIR TEMPERATURE LEAVING WATER TEMPERATURE MAKE-UP AIR UNIT MOTOR CONTROL CENTER MOUNTING HEIGHT MOTOR OPERATED DAMPER NORMALLY CLOSED NORMALLY OPEN OPPOSED BLADE VOLUME DAMPER OPEN SITE DRAIN OUTSIDE AIR-OAU OUTSIDE AIR UNIT POUNDS PER SQUARE INCH GAUGE POWER ROOF VENTILATOR POOL DEHUMIDIFICATION UNIT POOL CONDENSING UNIT PACKAGED TERMINAL AIR CONDITIONING UNIT PACKAGED TERMINAL HEAT PUMP UNIT PUMP (SEE SCHEDULE FOR TYPE) PRESSURE DROP (FT OF HEAD UNLESS OTHERWISE SPECIFIED) RETURN AIR RETURN AIR FAN RADIATION DAMPER EXISTING TO BE RELOCATED RELIEF HOOD ROOF TOP UNIT RELIEF DAMPER SUPPLY AIR SMOKE DAMPER SUPPLY FAN STATIC PRESSURE (INCHES H20 UNLESS OTHERWISE SPECIFIED). UNDERCUT DOOR UNLESS OTHERWISE NOTED UNIT VENTILATOR VOLUME DAMPER VARIABLE AIR VOLUME VARIABLE VOLUME TEMPERATURE WG WATER GAUGE WATER PRESSURE DROP WPD WATER SOURCE HEAT PUMP WB F WET BULB TEMPERATURE EXISTING TO BE REMOVED.

 \mathcal{O} BE GRE 0 5 REVISIONS: DESIGN DEVELOP. 09.13.05 ISSUE FOR PERMIT 01.22.0

| GTMARCHITECTS

7735 OLD GEORGETOWN ROAD

SUITE 700

(240)333-2000

BETHESDA, MD 20814

(240)333-2001 FAX

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PERMIT COMMENTS 11.03.08

09.08.09

BID SET

DRAWN BY:

CHECKED BY

PROJECT NO.

SCALE:

DATE:

SEAL:

ALL HYAC UNITS TO HAVE HARD PIPED COPPER CONDENSATE DRAINAGE SYSTEM. MINIMUM PIPE SIZE SHALL BE I" PLUS INSULATION. CONDENSATE SHALL BE PIPED TO STORM DRAINAGE SYSTEM. CONTRACTOR TO PROVIDE SHOP DRAWINGS (1/8" SCALE) INDICATING PROPOSED LAYOUT OF CONDENSATE PIPING SYSTEM. CONTRACTOR TO PROVIDE CONDENSATE PUMPS AS REQUIRED W/ POWER.

- ALL CONDENSATE PIPING TO BE SIZED AND PITCHED PER IMC. - CONDENSATE PUMPS LOCATED IN PLENUMS TO BE "PLENUM" RATED.

-ELECTRIC HEATER

-VAV SINGLE DUCT BOX SIZE

- CONTRACTOR SHALL PROVIDE IN HIS PRICE ALL ELECTRICAL AND PLUMBING WORK REQUIRED FOR A COMPLETE AND OPERATIONAL CONDENSATE REMOVAL SYSTEM.

VENTILATION AIR

CONDENSATE DRAINAGE

ALL OCCUPIED SPACES ARE DESIGNED TO COMPLY WITH IMC 2000, CHAPTER 4, SECTION 403 & TABLE 403.3 REQUIREMENTS.

ROOF TOP DUCT SUPPORTS - MIRO INDUSTRIES

MIRO INDUSTRIES MODEL 8DS

MIRO INDUSTRIES 1.800.768.6976

DUCT SUPPORTS TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS. MAXIMUM SPACING 8'-0".

PROVIDE SUPPORT AT EACH SIDE OF DUCT ELBOWS.

PROVIDE RESTRAINT FRAMES.

PROVIDE WITH INSULATION SHIELDS TO PREVENT DAMAGE TO DUCTWORK INSULATION OR VAPOR BARRIER.

SUPPORT TO BE THERMALLY ISOLATED FROM DUCTWORK.

HURST & ASSOCIATES CONSULTING ENGINEERS 308 HILLWOOD AVE. FALLS CHURCH, VA. 22046 (703) 534-7872

NOTE:

THE CONSTRUCTION OF THIS PROJECT REQUIRES THE CONTRACTOR TO COORDINATE WORK SHOWN ON THIS DRAWING WITH THAT OF ALL OTHER TRADES. IN ADDITION, ALL PIPING, CONDUITS, DUCTWORK, ETC., ARE TO BE INSTALLED WITHIN THE JOISTS / GIRDERS AND TO MAINTAIN THE MINIMIM REQUIRED CLEARANCES, WON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES RESULTING FROM CONFLICTS WITH OTHER TRADES AND WORK. IN THE EVENT OF ANY CONFLICTS THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OR THEIR REPRESENTATIVE IN WRITING FOR CLARIFICATION BEFORE PROCESSING.

DRAWING NO.

NONE

08/03/05

03.0299

| | | | PA | NELE | <u> 30</u> / | <u>\R[</u> |) | | SCHED |)ULE | _ - _ | | ` | | |
|-------------------------|-----------------|--------------|--------------|---------------------------|--------------|------------|---------|-------------|---------------------------|--------|--------------|----------|----------------------------|-----------|-----------------|
| PANEL: A (NEW) | LOCATION | : LOBB | 1 | | | FE | EEDE | ER: S | EE RISER | | | MAINS: | 225A MLO A.I.C.: 65K | PANEL: B | (NEW) |
| VOLTAGE: 120/208 | PHASE: 3 | WIF | RE: 4 | BUS | SING: | COPF | PER | | FED FR | OM: MD | Р | | MOUNTING: SURFACE | VOLTAGE: | 120/20 |
| DESCRIPTION | A Ø | 'ATTA(Bø | GE Cø | BRANCH BREAKER SIZE | CKT. NO. | AE | 3C | CKT. NO. | BRANCH BREAKER SIZE | AØ | 'ATTA(Bø | GE Cø | DESCRIPTION | | DESCR |
| LIGHTING LOBBY | 900 | | | 1/20* | 1 | ++ | +1 | 2 | 1/20* | 500 | | | LIGHTING MEN'S ROOM | RECE | PTADCL |
| LIGHTING WOMEN'S ROOM | | 360 | | 1/20* | 3 | 1 | ∓ 1 | 4 | 1/20* | | 1200 | | LIGHTING FOYER | \ | LIGHT |
| LIGHTING THEATER | | | 800 | 1/20 | 5 | 1- | + | 6 | 1/20* | | | 1800 | LIGHTING THEATER | FIRE ALA | ARM CC |
| THEATER | 1800 | | | 1/20* | 7 | | +1 | 8 | 1/20* | 300 | | | LIGHTING STORAGE | RTU | J RECE |
| RECEPTACLE GFI | | 180 | | 1/20 | 9 | 1 | +1 | 10 | 1/20 | | 360 | | CASH REGISTER RECEPTACLE | A | SILE LI |
| EXHAUST FAN EF-1 | | | 100 | 1/20 | 11 | 1 | + | 12 | 1/20 | | | 720 | LOBBY RECEPTACLES | | SPA |
| EXHAUST FAN EF-4 | 300 | | | 1/20 | 13 | 1 | ∓ 1 | 14 | 1/20 | 1080 | | | RECEPTACLES FOYER |) | SPA |
| EXHAUST FAN EF-3 | | 220 | | 1/20 | 15 | 1 | ∓ 1 | 16 | 1/20 | | 360 | | RECEPTACLE THEATER | | SPA |
| EXHAUST FAN EF-2 | | | 350 | 1/20 | 17 | 1- | + | 18 | 1/20 | | | 360 | RECEPTACLE THEATER |) | SPA |
| RECEPTACLES STORAGE | 400 | | | 1/20 | 19 | 1 | ∓ 1 | 20 | 1/20 | 720 | | | RECEPTACLE CONCESSION AREA | SPACE | WITH |
| GARBAGE DISPOSAL | | 1000 | | 1/20 | 21 | | \mp | 22 | 1/20* | | 500 | | OUTDOOR LIGHTING FIXTURES | SPACE | WITH |
| LIGHTING CANOPY | | | 1600 | 1/20* | 23 | 1- | + | 24 | 1/20 | | | 1000 | OUTSIDE SIGN | SPACE | WITH |
| OUTSIDE SIGN | 1000 | | | 1/20 | 25 | | +1 | 26 | 1/20 | 1000 | | | OUTSIDE SIGN | SPACE | WITH |
| OUTSIDE SIGN | | 1000 | | 1/20 | 27 | 1 | +1 | 28 | 2 | | 2250 | | WATER HEATER | SPACE | WITH |
| EWC | | | 1200 | 1/20 | 29 | 1- | + | 30 | 30 | | | 2250 | | SPACE | WITH |
| A - ICE MACHINE | 600 | | | 1/25 | 31 | 1 | +1 | 32 | 1/20 | 180 | | | RECEPTACLE GFI | 〈 | |
| B - SODA MACHONE | | 600 | | 1/20 | 33 | 1 | +1 | 34 | 1/20 | | 400 | | C - BUTTER SERVER |) | |
| E – BEVERAGE CHILLER | | | 600 | 1/20 | 35 | 1- | + | 36 | 3 | | | 2850 | D- POPCORN MACHINE | | |
| SPARE | 180 | | | 1/20 | 37 | | +1 | 38 | | 2860 | | | SPACE WITH PROVISIONS | "A" PHASE | |
| SPARE | | 180 | | 1/20 | 39 | - | +1 | 40 | 30 | | 2850 | | SPACE WITH PROVISIONS | TOTAL LOA | |
| SPARE | | | 180 | 1/20 | 41 | ++ | + | 42 | 1/20 | | | 200 | SPARE | HIGH PHAS | SE: 8, 0 |
| SUBTOTAI | LS: 7480 | 5160 | 4830 | | | | S | SUB | TOTALS: | 8250 | 7920 | 9180 | | | |
| "A" PHASE TOTAL: 15,730 | "В | " PHAS | SE TOTA | AL: 13,080 |) | 'n | c" | PHA: | SE TOTAL: | 14,010 |) * | PROVID | DE C/B GUARD | \ | |
| TOTAL LOAD: 42,820 | WATTS | AT 20 | 08V X√3 | 3 | VOL | | | | , 4 WIRE 1 | | | | | <i>,</i> | |
| HIGH PHASE: 15,730 | WATTS | AT 12 | 20 | | VOL | ΓS, 1 | PH | ASE | 131 AMP | S | - | | | | |

| | | | PΑ | NELE | 30 <i>A</i> | ·RE | | | CHED |)ULE | - - | | | | |
|---|----------------|-------------|-------------|---------------------------|-------------|------|--------------------------------|-------|-----------|---------------------|-------------------|--------|-------------------|--------------------|--|
| PANEL: B (NEW) | LOCATION | : PROJE | CTION | BOOTH | | FE | ED | ER: S | EE RISER | | | MAINS: | 100A MLO | A.I.C.: 65K | |
| , , | PHASE: 3 | WIR | E: 4 | BUS | SING: | COPF | ER | | FED FR | OM: MD | Р | | MOUNTING: SURFACE | | |
| DESCRIPTION | Aø | ATTA(Bø | GE Cø | BRANCH BREAKER SIZE | CKT. NO. | AB | CKT. BRANCH BREAKER SIZE | | | WATTAGE AØ BØ CØ | | | DE | SCRIPTION | |
| RECEPTADCLES OFFICE | 360 | | | 1/20* | 1 | + | + | 2 | 1/20 | 1000 | | | RECEPTO | CALES STORAGE | |
| LIGHTING | | 1200 | | 1/20 | 3 | - | + | 4 | 1/20 | | 1000 | | RE | CEPTCALE | |
| FIRE ALARM CONTROL PANEL | | | 1000 | 1/20 | 5 | ++ | + | 6 | 1/20 | | | 1000 | RE | CEPTCALE | |
| RTU RECEPTCALES | 600 | | | 1/20* | 7 | + | + | 8 | 1/20 | 200 | | | RTU | RECEPTCALE | |
| ASILE LIGHTING | | 200 | | 1/20 | 9 | - | + | 10 | 1/20 | | 1200 | | | SPARE | |
| SPARE | | | 1200 | 1/20 | 11 | + | + | 12 | 1/20 | | | 1200 | | SPARE | |
| SPARE | 1200 | | | 1/20 | 13 | + | \mp | 14 | 1/20 | 1200 | | | | SPARE | |
| SPARE | | 1200 | | 1/20 | 15 | - | + | 16 | 1/20 | | 1200 | | | SPARE | |
| SPARE | | | 1200 | 1/20 | 17 | ++ | + | 18 | 1/20 | | | 1200 | | SPARE | |
| SPACE WITH PROVISIONS | 600 | | | 1/- | 19 | + | \mp | 20 | 1/- | 600 | | | SPACE W | ITH PROVISIONS | |
| SPACE WITH PROVISIONS | | 600 | | 1/- | 21 | + | \mp | 22 | 1/- | | 600 | | SPACE W | ITH PROVISIONS | |
| SPACE WITH PROVISIONS | | | 600 | 1/- | 23 | ++ | + | 24 | 1/- | | | 600 | SPACE W | ITH PROVISIONS | |
| SPACE WITH PROVISIONS | _ | | | 1/- | 25 | + | \mp | 26 | 1/- | _ | | | SPACE W | ITH PROVISIONS | |
| SPACE WITH PROVISIONS | | - | | 1/- | 27 | + | \pm | 28 | 1/- | | - | | SPACE W | ITH PROVISIONS | |
| SPACE WITH PROVISIONS | | | ı | 1/- | 29 | # | + | 30 | 1/- | | | 1 | SPACE W | ITH PROVISIONS | |
| SUBTOTAL | S: 2760 | 3200 | 4000 | | | | ` | SUB | ΓΟTALS: | 3000 | 4000 | 4000 | | | |
| "A" PHASE TOTAL: 5,700 | "В | " PHAS | E TOTA | AL: 7,200 | | "(| 2" | PHAS | SE TOTAL: | 8,000 | * | PROVID | E C/B GUARD |) | |
| TOTAL LOAD: 20,960 WATTS AT 208V $\sqrt{3}$ VOLTS, 3 PHASE, 4 WIRE 58 | | | | | | | | | | | MPS - | | • | | |

VOLTS, 1 PHASE 67 AMPS

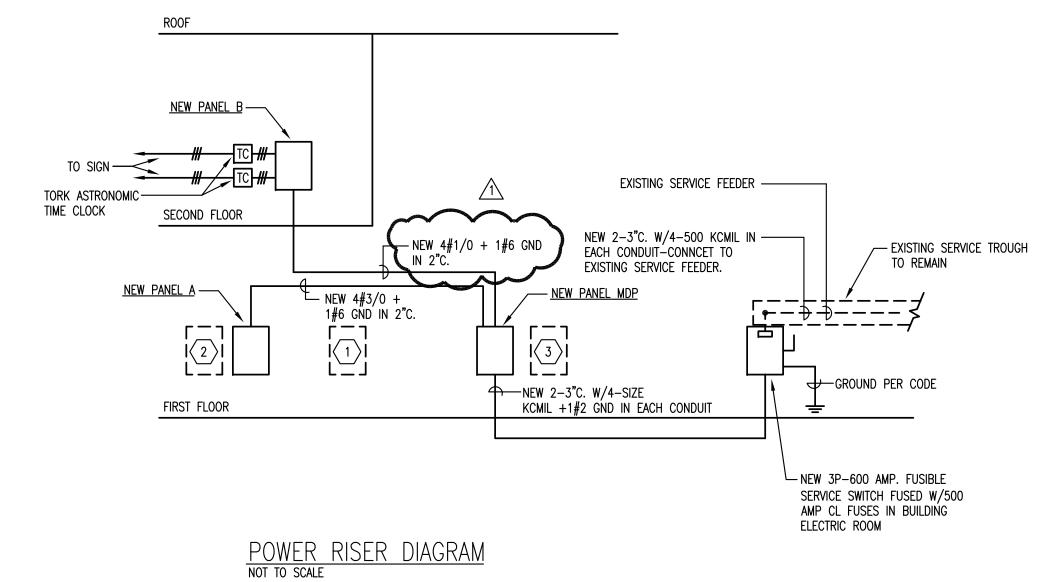
WATTS AT 120

| PANEL: MDP (NEW) | LOCATION: STORAGE | | | FEEDER: SEE RISER | | | | | | | | MAINS: 800A MCB A.I.C.: 100 I | | |
|--------------------------------|-------------------|-------------|----------|---------------------------------|-------------|----|--------------------|-------------|---------------------------|-----------|----------------|---|---------|------------------|
| VOLTAGE: 120/208 | PHASE: 3 WIRE: 4 | | | BUSSING: COPPER FED FROM: TRANS | | | | | | | NSFOR | | | MOUNTING: SURFAC |
| DESCRIPTION | AØ | ATTA(Bø | GE Cø | BRANCH BREAKER SIZE | CKT. NO. | A | ВС | CKT. NO. | BRANCH BREAKER SIZE | W Aø | ATTA(Bø | SE Cø | | DESCRIPTION |
| RTU-1 | 14400 | | | 3 / | 1 | + | + | 2 | 3 | 10200 | | | | RTU-2 |
| | | 14400 | | * | (3) | 1 | | (4) | * | | 10200 | | | |
| | | | 14400 | 150 | (5) | 1- | - | (6) | 110 | | | 10200 | | |
| RTU-3 | 3720 | | | 3 / | 7 | | H | 8 | 3 / | 2520 | | | | RTU-4 |
| | | 3720 | | * | (9) | + | \vdash | (10) | * | | 2520 | | | |
| | | | 3720 | 40 | (11) | | \vdash | (12) | 30 | | | 2520 | | |
| PANEL "A" | 15730 | • | | 3 | 13 | | \vdash | 14 | 3 / | 5760 | | | | PANEL "B" |
| | | 13080 | | | (15) | 1 | \vdash | (16) | | | 7200 | | | |
| | | | 14100 | 200 | (17) | 1 | | (18) | / 100 | | | 8000 | | |
| SPARE | 6000 | | | 3 | 19 | | $oldsymbol{\perp}$ | 20 | 3 |] - | | | SPACE | WITH PROVISIONS |
| | | 6000 | | | (21) | - | | (22) | | | - | | | |
| | | | 6000 | / 100 | (23) | | + | (24) | / - | | | - | | |
| SUBTOTA | LS: 39850 | 38220 | 38229 |] | | • | | SUB | TOTALS: | 18480 | 19920 | 20720 | | |
| | | | ! | • | | 4 | | | | | N _M | | | |
| "A" PHASE TOTAL: 58,330 | | " PHAS | SE TOTA | AL: 58,14 0 |) | | "C" | PHAS | SE TOTAL: | 58,940 | * | HACR T | YPE C/B | |
| TOTAL LOAD: 175,310 | | | | 3 | | | | | | | | | , - | |
| HIGH PHASE: 58,940 | WATTS | | | | | | | | 491 AMF | | 7- | | | |

MECHANICAL/ELECTRICAL COORDINATION REQUIREMENTS

MECHANICAL CONTRACTOR WITHIN 20 DAYS OF RECEIPT OF CONTRACT TO PROVIDE TO THE ELECTRICAL CONTRACTOR A COMPLETE SET OF MECHANICAL EQUIPMENT SHOP DRAWINGS FOR ALL MECHANCIAL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS OR POWER. SHOP DRAWINGS SHALL SHOW ALL REQUIRED ELECTRICAL CONNECTIONS, MINIMUM CIRCUIT AMPS, WIRE SIZES, OVER CURRENT PROTECTION, CONNECTION TYPES AND ANY OTHER INFORMATION REQUIRED FOR THE PROPER EQUIPMENT INSTALLATION AND OPERATION.

MECHANICAL AND ELECTRICAL CONTRACTORS SHALL COORDINATE THIS INFORMATION AND PREPARE A CONNECTION SCHEDULE FOR SUBMISSION AND REVIEW BY ENGINEER BEFORE PROCEEDING WITH WORK.



RISER DIAGRAM NOTES

1. EXISTING PANELS IN THE FOLLOWING LOCATIONS TO BE REMOVED COMPLETE:

- 1 HALL
 2 LOBBY
- 3 BEHIND STAGE IN STORAGE

| LIGHTING FIXTURE SCHEDULE | | | | | | | | | | | |
|---------------------------|----------|------------------------------------|---------------------------------------|---------------------------------|----------|---|--|--|--|--|--|
| SYMBOL | ITEM NO. | MANUFACTURER | CATALOG NO. | LAMPS | MOUNTING | REMARKS | | | | | |
| □ _A | Α | SELECTED AND PURCHASED BY OWNER | - | - | - | MODIFY EXISTING RECESSED FIXTURE W/ NEW DROPPED DIFFUSER | | | | | |
| | В | SELECTED AND PURCHASED BY OWNER | - | - | - | CUSTOM FIXTURE | | | | | |
| φ | С | WILLIAMS | PB4C11-226-EB- G24Q/3-MWT- 120 | 2-26W. 4 PIN COMP. FLOUR. | SURFACE | SURFACE MOUNTED FLUORESCENT FIXTURE | | | | | |
| | D | SELECTED AND PURCHASED BY OWNER | - | - | _ | CUSTOM FIXTURE W/ 85W HIGH OUTPUT WARM WHITE, SINGLE T-12 FLUORESCENT LAMP 3000K COLOR (DIA. 1 1/2" LENGTH 72") | | | | | |
| | E | (NOT USED) | - | - | _ | - | | | | | |
| - (- (- | F | WILLIAMS | PH60-218Q- G244-2-MWT- BH-120 | 2-18W. 2 PIN COMP. FLOUR. | RECESSED | FLUORESCENT OPEN DOWNLIGHT | | | | | |
| - © - | G | WILLIAMS | PH75-242T/EB- GX24Q/4-EB-120 BH | 2-42W. 4 PIN COMP. FLOUR. | RECESSED | FLUORESCENT DOWNLIGHT | | | | | |
| -⊕- | Н | SELECTED AND PURCHASED BY OWNER | - | - | _ | 150W LIGHTS ON SUPSENDED METAL TRACK | | | | | |
| HX | 1 | SELECTED AND PURCHASED BY OWNER | - | - | - | CUSTOM SCONCE W/ FUORESCENT LAMP | | | | | |
| . K | К | WILLIAMS | U3F-D22- 232U-33W- EB2-120 | 2-U/BENT 32W T-8 | RECESSED | RECESSED 2X2 FUORESCENT FIXTURE | | | | | |
| HX | L | - | - | - | - | EXISTING WALL MOUNTED FIXTURE TO REMAIN | | | | | |
| м | М | CALIFORMIA ACCENT LIGHTING | AlL 1100/12" OC/ LED-Y/CL | LED-Y | ON FLOOR | FLOOR MOUNTED EMERGENCY STRIP LIGHTING ALONG THEATER AISLES INVERTER: EXITRONIX #PWR6-1 (FOR EMERGENCY BATTERY OPERATION) | | | | | |
| HXX | N | LUMINAIRE | SWP-610-EMB- CAB-PC-120 | 2-26W. PL35K FLOUR. | WALL | EXTERIOR EGRESS-MOUNT OVER DOOR-EM BATTERY WITH PHOTOCELL-WET LOCATION | | | | | |
| ÞØ | 0 | SELECTED AND PURCHASED BY OWNER | - | - | - | CUSTOM FLUORESCENT LIGHT FIXTURE | | | | | |
| 4 | Р | WILLIAMS | EMER-WHT- SDT | LAMPS FURNISHED | WALL | EMERGENCY BATTERY PACK UNIT WITH TWO INTERGRAL HEADS | | | | | |
| — •— | R | WILLIAMS | 81-4-232- EB2-120 | 2-32W T-8 FLOUR. | CEILING | STORAGE AREA & SECOND FLOOR | | | | | |
| -\$- | S | WILLIAMS | A45-100-A19IF/ MED-MWT-BH- 120 | 2-32W T-8 FLOUR. | RECESSED | FOYER | | | | | |
| ₩ | Т | WILLIAMS | EMER-WET- WG | LAMPS FURNISHED | WALL | EMERGENCY BATTERY PACK UNIT WITH TWO INTERGRAL HEADS — WET LOCATION | | | | | |

HURST & ASSOCIATES
CONSULTING ENGINEERS 308 HILLWOOD AVE. FALLS CHURCH, VA. 22046 (703) 534-7872

NOTE:
THE CONSTRUCTION OF THIS PROJECT REQUIRES THE CONTRACTOR TO COORDINATE WORK SHOWN ON THIS DRAWING WITH THAT OF ALL OTHER TRADES. IN ADDITION, ALL PIPING, CONDUITS, DUCTWORK, ETC., ARE TO BE INSTALLED WITHIN THE JOISTS / GIRDERS AND TO MAINTAIN THE MINIMM REQUIRED CLEARANCES, WON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES RESULTING FROM CONFLICTS WITH OTHER TRADES AND WORK. IN THE EVENT OF ANY CONFLICTS THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OR THEIR REPRESENTATIVE IN WRITING FOR CLARIFICATION BEFORE PROCCEEDING.

GTMARCHITECTS

7735 OLD GEORGETOWN ROAD SUITE 700 BETHESDA, MD 20814 (240)333-2000 (240)333-2001 FAX

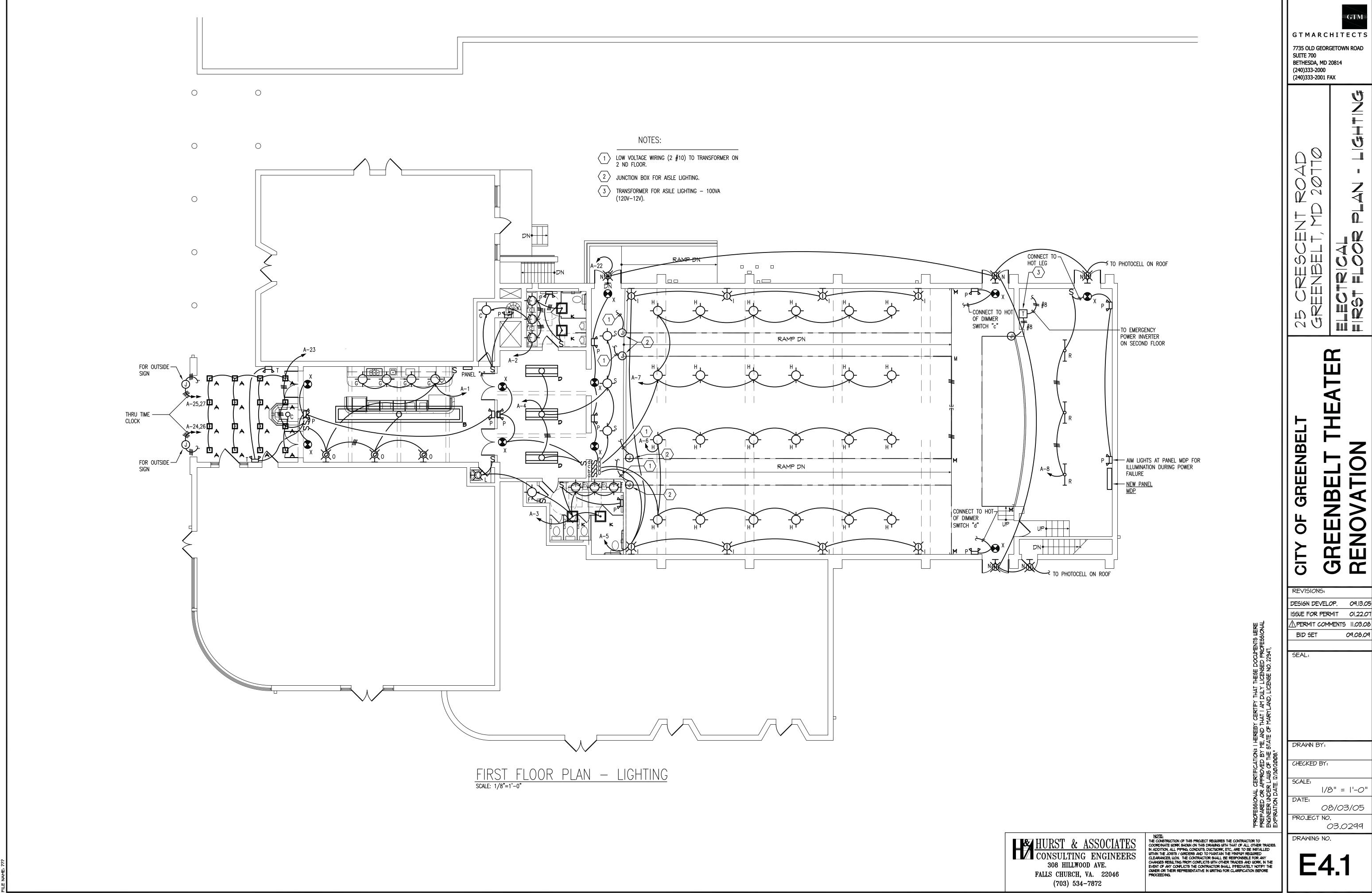
25 CRESCE GREENBELT ELCTRICAL PANEL * LIG

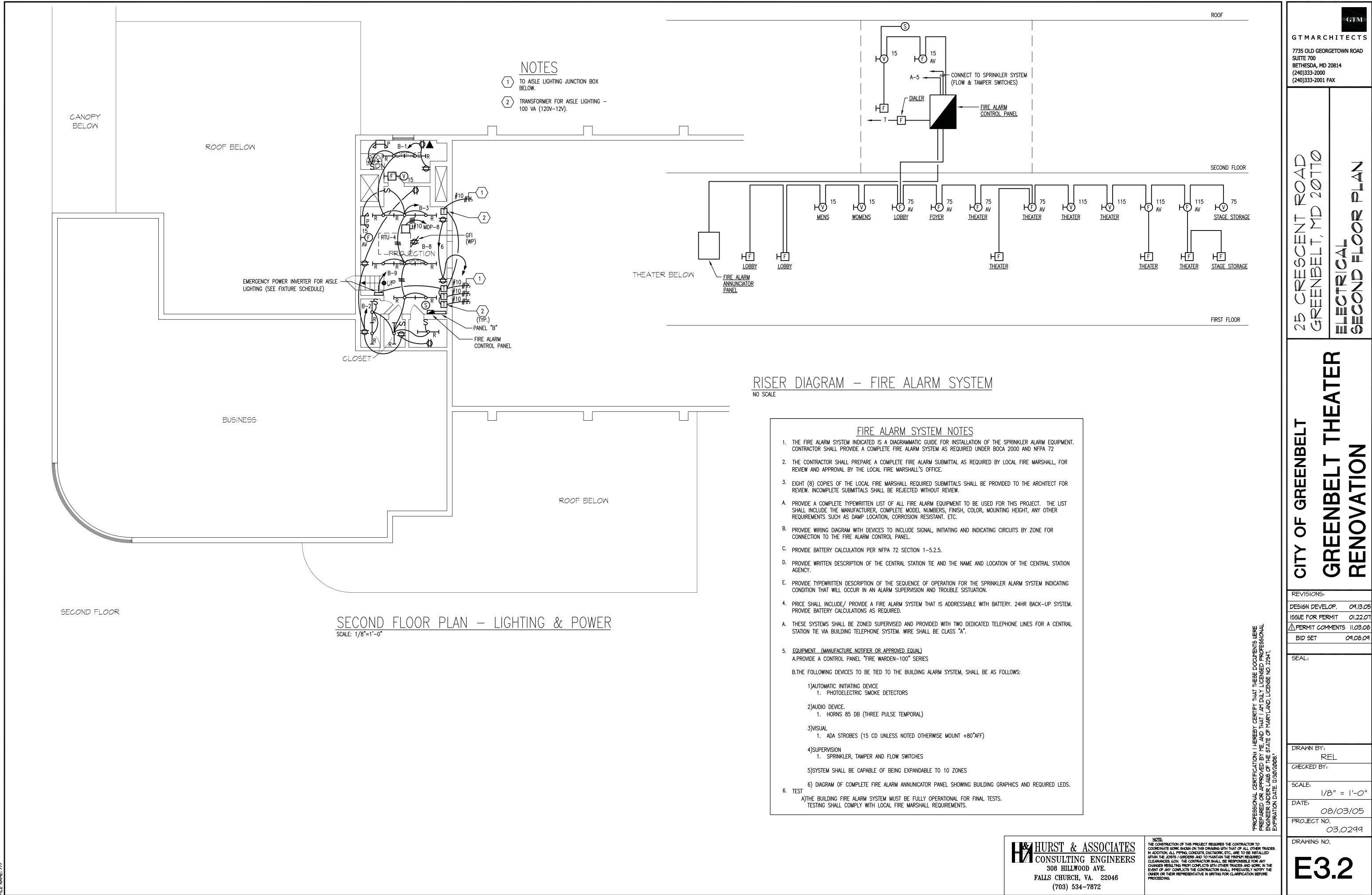
ENBEL GREENBEL GRE

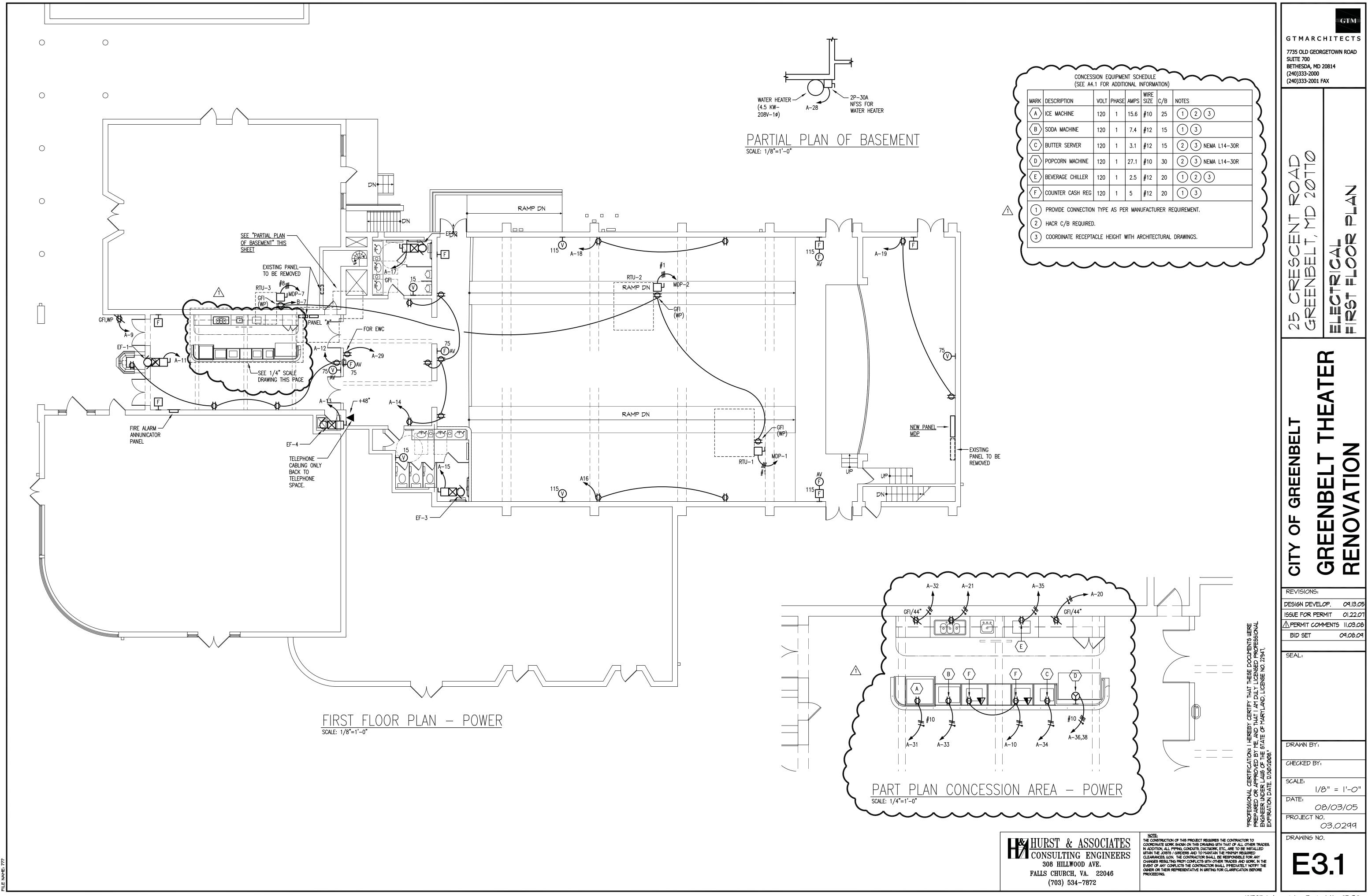
REVISIONS: DESIGN DEVELOP. 09.13.05 ISSUE FOR PERMIT 01.22.07 PERMIT COMMENTS 11.03.08 BID SET

DRAWN BY: REL CHECKED BY:

SCALE: NONE 08/03/05 PROJECT NO. 03.0299







GENERAL NOTES

<u>DESIGN LOADS</u>

THE FOLLOWING DESIGN LIVE LOADS HAVE BEEN USED, AS SPECIFIED IN INTERNATIONAL BUILDING CODE 2000, CHAPTER 16.

ROOF LIVE LOAD (SECTION 1607.11.2) OR MINIMUM D.C. REQUIREMENT, WHICHEVER CONTROLS.....30 LBS./SQ.

ROOF SNOW LOAD (SECTION 1608). BASED ON ASCE 7-98.

Pg = 30.0 PSFCe = 1.1

ls = 1.1

REQUIRED Pf = 0.7x1x1.1x1.1x30 = 21 PSF.

ADDITIONAL LOADS DUE TO SNOW DRIFTS AS PER PROVISIONS OF ASCE 7-98 HAVE BEEN CONSIDERED WHERE APPLICABLE.

WIND LOAD (SECTION 1609).

BASIC WIND SPEED....

WIND DIRECTIONALITY FACTOR......0.85 WIND LOAD IMPORTANCE FACTOR......1.10

WIND EXPOSURE CATEGORY.....EXPOSURE B.

LATERAL LOADS AGAINST BUILDING WALLS DUE TO EARTH PRESSURE ARE ASSUMED TO BE 45 LBS PER SQ.

FT. PER FT. DEPTH.

STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS". ALL WIDE FLANGE BEAMS & CHANNELS SHALL CONFORM TO ASTM A572 OR A992, GRADE 50 (FY = 50 KSI). STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B. STEEL TUBE SHALL CONFORM TO ASTM A500, GRADE B. ALL OTHER STEEL SHALL CONFORM TO ASTM A36 (FY = 36 KSI).

BOLTED, WELDED AND COMBINATION CONNECTIONS SHALL BE DETAILED IN ACCORDANCE WITH "FRAMED BEAM CONNECTIONS" USING TWO WEB ANGLES AS SHOWN IN THE LATEST EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION" (ALLOWABLE STRESS DESIGN).

SEATED CONNECTIONS SHALL BE DETAILED IN ACCORDANCE WITH "SEATED BEAM CONNECTIONS" AS SHOWN IN THE LATEST EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION", AND MAY BE USED TO CONNECT STEEL JOISTS TO COLUMN FLANGES OR STEEL BEAMS TO GIRDERS AND GIRDERS TO COLUMN. PROVIDE WELDED STABILIZER PLATES OR ANGLES AT TOP OF BEAMS AT ALL SEATED CONNECTIONS.

STEEL CONNECTIONS AT ENDS OF MEMBERS SHALL BE DESIGNED (FOR THE REACTIONS NOTED ON THE DRAWINGS) FOR THE FRACTION OF THE "ALLOWABLE UNIFORM LOAD" AS GIVEN IN THE AISC MANUAL (WcL/2) FOR THE MEMBER, THE SPAN AND GRADE OF STEEL.

SHOP DRAWINGS

THE GENERAL CONTRACTOR (OR CONSTRUCTION MANAGER) SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS FOR APPROVAL (ONE REPRODUCIBLE PLUS NOT MORE THAN TWO PRINTS). THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT IF THE GENERAL CONTRACTOR FAILS TO OBTAIN APPROVAL OF THE SHOP DRAWINGS. THE GENERAL CONTRACTOR SHALL INFORM THE STRUCTURAL ENGINEER IN WRITING CONCERNING DEVIATIONS AND/OR OMISSIONS FROM THE CONTRACT DOCUMENTS AT THE TIME OF SHOP DRAWING SUBMISSION. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS AND SHALL MAKE ALL CORRECTIONS HE DEEMS NECESSARY BEFORE SUBMISSION. THE GENERAL CONTRACTOR SHALL STATE ON THE SHOP DRAWINGS THAT CONTRACT DOCUMENT O.C. (6'-0" O.C.) BRACING SHALL REMAIN IN PLACE UNTIL ROOF OR FLOOR MEMBERS HAVE BEEN SECURELY REQUIREMENTS HAVE BEEN MET AND THAT ALL DIMENSIONS, CONDITIONS AND QUANTITIES HAVE BEEN REVIEWED AND VERIFIED AS SHOWN AND/OR CORRECTED ON THE SHOP DRAWINGS.

CLEANING AND PAINTING OF EXPOSED STEEL SURFACES

COMPLETE WELDING AND REPAIRS OF DETERIORATED STEEL ELEMENTS PRIOR TO CLEANING AND PAINTING OPERATION. ENGAGE AN EXPERIENCED APPLICATOR WHO HAS COMPLETED HIGH-PERFORMANCE COATING SYSTEM APPLICATIONS SIMILAR IN MATERIAL AND EXTENT TO THOSE INDICATED.

SURFACE PREPARATION: CLEAN UNGALVANIZED FERROUS-METAL SURFACES THAT HAVE NOT BEEN SHOP COATED; REMOVE OIL, GREASE, DIRT, LOOSE MILL SCALE, AND OTHER FOREIGN SUBSTANCES. CLEAN METAL SURFACES BY AN ABRASIVE BLAST METHOD.

- A. BLAST-CLEAN EXISTING PAINT FROM STEEL SURFACES AS RECOMMENDED BY COATING MANUFACTURER AND ACCORDING TO SSPC-SP 10/NACE NO. 2.
- B. TREAT BARE AND SANDBLASTED OR PICKLED CLEAN METAL WITH A METAL TREATMENT WASH COAT

ALLOW SUFFICIENT TIME BETWEEN SUCCESSIVE COATS TO PERMIT PROPER DRYING. DO NOT RECOAT

SURFACES UNTIL COATING HAS DRIED TO WHERE IT FEELS FIRM, DOES NOT DEFORM OR FEEL STICKY UNDER MODERATE THUMB PRESSURE, AND APPLICATION OF ANOTHER COAT DOES NOT CAUSE UNDERCOAT TO LIFT OR

APPLY COATINGS ONLY WHEN TEMPERATURE OF SURFACES TO BE COATED AND SURROUNDING AIR TEMPERATURES ARE BETWEEN 45 AND 95 DEG F. DO NOT APPLY COATINGS IN SNOW, RAIN, FOG, OR MIST; WHEN RELATIVE HUMIDITY EXCEEDS 85 PERCENT; AT TEMPERATURES LESS THAN 5 DEG F ABOVE THE DEW POINT; OR TO DAMP OR WET SURFACES.

ACCEPTABLE MANUFACTURER: BENJAMIN MOORE & CO. (MOORE).

VOC CLASSIFICATION: PROVIDE HIGH-PERFORMANCE COATING MATERIALS, INCLUDING PRIMERS, UNDERCOATS, AND FINISH-COAT MATERIALS, THAT HAVE A VOC CLASSIFICATION OF 450 G/L OR LESS.

FERROUS METAL: PROVIDE THE FOLLOWING FINISH SYSTEMS OVER EXTERIOR FERROUS-METAL SURFACES: MATT FINISH: ONE FINISH COAT OVER AN INTERMEDIATE COAT AND A PRIMER. FINISH COAT SHALL HAVE A SANDED TEXTURED FINISH.

- A. PRIMER: EPOXY PRIMER APPLIED AT SPREADING RATE RECOMMENDED BY MANUFACTURER. 1) MOORE: M36-00/M37 POLYAMIDE EPOXY CLEAR SEALER/FINISH.
- B. INTERMEDIATE COAT: EPOXY APPLIED AT SPREADING RATE RECOMMENDED BY MANUFACTURER TO ACHIEVE A DRY FILM THICKNESS OF 3.0 TO 8.0 MILS. 1) MOORE: SEMI-GLOSS EPOXY.
- C. TOPCOAT: ALIPHATIC POLYURETHANE ENAMEL APPLIED AT SPREADING RATE RECOMMENDED BY MANUFACTURER TO ACHIEVE A DRY FILM THICKNESS OF 1.5 TO 4.0 MILS. 1) MOORE: M74/M75 ALIPHATIC ACRYLIC URETHANE GLOSS WITH SANDED FINISH.

LATERAL BRACING OF STRUCTURAL ELEMENTS

PROVIDE ADEQUATE BRACING AND SHORING FOR BASEMENT, RETAINING AND PIT WALLS. BRACE BASEMENT AND PIT WALLS UNTIL SUPPORTING FLOORS ABOVE ARE IN PLACE AND HAVE ATTAINED DESIGN STRENGTH. DO NOT BACKFILL WALLS UNTIL AFTER FLOORS AT THE TOP AND BASE OF THE WALLS ARE IN PLACE. WHERE BACKFILL IS REQUIRED ON BOTH SIDES OF A WALL, BACKFILL BOTH SIDES SIMULTANEOUSLY WITH THE GRADE DIFFERENCE NOT TO EXCEED 2'-0" AT ANY TIME.

LATERALLY BRACE BUILDING WALLS IN AN APPROVED MANNER AT A MAXIMUM HORIZONTAL SPACING OF 8'-0" ANCHORED TO THE WALL

PROVIDE ADEQUATE BRACING AND GUY-WIRING FOR STEEL FRAME AND MEMBERS DURING STEEL ERECTION AND CONCRETE WORK ON DECK. STEEL FRAME SHALL BE PLUMB WITHIN AISC TOLERANCES AND PROJECT

WALLS SUPPORTED BY OR CONNECTED TO STEEL FLOOR MEMBERS SHALL NOT BE PLACED UNTIL PERMANENT ANCHORAGE AND BRACING SYSTEMS HAVE BEEN INSTALLED, AND UNTIL CONCRETE WORK FOR FLOOR DECKS IS COMPLETED. WALLS AND PARAPETS SUPPORTED BY OR CONNECTED TO STEEL ROOF BEAMS SHALL NOT BE PLACED UNTIL ROOF DECK INSTALLATION IS COMPLETE.

OPENINGS AND PIPE SLEEVES

SIZE AND LOCATION OF ALL OPENINGS SHALL BE COORDINATED WITH ARCHITECTURAL, ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS. FORM OPENINGS AND PROVIDE PIPE SLEEVES WHEN POURING CONCRETE. HOLES LARGER THAN 2" IN DIAMETER SHALL NOT BE CUT INTO SLABS WITHOUT PERMISSION OF THE STRUCTURAL ENGINEER. ARRANGE REINFORCING AROUND OPENINGS AS SHOWN IN TYPICAL DETAILS. EMBEDDED PIPES OR CONDUITS SHALL BE SPACED AT LEAST THREE DIAMETERS ON CENTERS, UNLESS OTHERWISE NOTED. EXCESSIVE CROSSING OVER OF CONDUITS IN SLABS WILL NOT BE PERMITTED. PIPE SLEEVES SHALL NOT BE SPACED CLOSER THAN 8" CLEAR FROM ANY COLUMN UNLESS NOTED ON DRAWINGS. PLACE SLAB BARS TO CLEAR SLEEVES AND MAINTAIN 1 1/2" CLEAR SPACING BETWEEN BARS. WHERE SLEEVES ARE CLOSELY SPACED IN A GROUP, THE GROUP SHALL BE TREATED AS AN OPENING AND REINFORCED ACCORDINGLY. WHERE FLOORS ARE PENETRATED BY OPENINGS, SEAL THE OPENINGS TO MAINTAIN THE INTEGRITY OF FIRE RATING.

REINFORCING STEEL

REINFORCING BARS SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. REINFORCING BAR MATS SHALL ALSO CONFORM TO ASTM A184. BARS SHALL BE BRANDED BY THE MANUFACTURER WITH BAR SIZE AND GRADE OF STEEL AND CERTIFIED MILL REPORTS SHALL BE SUBMITTED FOR RECORD. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST

PROVIDE CORNER BARS AT JUNCTIONS OF CONCRETE WALLS, GRADE BEAMS AND WALL FOOTINGS AND LAP WITH WALL REINFORCING AS SHOWN IN TYPICAL DETAILS.SIZE AND SPACING OF CORNER BARS TO BE SAME AS HORIZONTAL WALL REINFORCING, UNLESS SHOWN OTHERWISE. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AS NECESSARY.PROVIDE STANDARD HOOKS AT DISCONTINUOUS ENDS. TENSION AND COMPRESSION LAP SPLICES SHALL NOT BE LESS THAN THE SPLICE LENGTHS AS GIVEN IN ACI-318. GENERALLY LAP TOP BARS AT MID SPAN AND BOTTOM BARS AT SUPPORTS. PROVIDE PLACING ACCESSORIES IN ACCORDANCE WITH ACI RECOMMENDATIONS.

MISCELLANEOUS STEEL

MISCELLANEOUS STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", AND SHALL BE ASTM A36. BOLTS SHALL BE HIGH STRENGTH 3/4" DIAMETER CONFORMING TO ASTM A325. WELDING SHALL BE DONE ONLY BY CERTIFIED WELDERS. WELD IN ACCORDANCE WITH THE AWS "STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION". STRUCTURAL STEEL SURFACES CAST INTO CONCRETE SHALL BE

SUBMIT STRUCTURAL STEEL SHOP DRAWINGS SHOWING COMPLETE DIMENSIONS AND DETAILS FOR APPROVAL PRIOR TO FABRICATION. THE STRUCTURAL STEEL SUBCONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING. VERIFICATION, AND FOR COORDINATION OF DIMENSIONS AND DETAILS WITH THE STRUCTURAL AND OTHER PORTIONS OF THE CONTRACT DRAWINGS. THE STRUCTURAL CONTRACT DRAWINGS SHALL NOT BE REPRODUCED AS SHOP DRAWINGS UNLESS THE STRUCTURAL ENGINEER'S APPROVAL IS OBTAINED IN WRITING.

HARDWARE ATTACHMENT

PROVIDE COLUMN CAPS, WHERE BEAMS FRAME TO COLUMNS, SUCH AS CC/ECC BY SIMPSON OR APPROVED EQUAL. CAPS SHALL HAVE ENOUGH LENGTH TO PROVIDE A MINIMUM OF 4" OF BEARING LENGTH FOR EACH

HEADERS WILL BE FASTENED TO POSTS WITH METAL CAPS SUCH AS AC AND ACE OR HH BY SIMPSON OR APPROVED EQUAL. ALTERNATELY WOOD POSTS MAYBE INSTALLED TIGHT UNDER WOOD BEAMS AND CUT SO THAT THE BEAM BEARING IS UNIFORM ON THE POST AND METAL CAP ELIMINATED.

ROOF TRUSSES SHALL HAVE HURRICANE TIES SUCH AS H2.5 BY SIMPSON OR APPROVED EQUAL. GIRDER TRUSSES SHALL HAVE TWO TIES AT EACH END.

PROVIDE TWO METAL STRAPS BETWEEN POST AND BEAM/GIRDER TRUSSES AT THE TOP FLOOR. USE LTS18 OR TS18 BY SIMPSON OR APPROVED EQUAL.

GTMARCHITECTS

7735 OLD GEORGETOWN ROAD SUITE 700 BETHESDA, MD 20814 (240)333-2000 (240)333-2001 FAX

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REVISIONS:

SEAL:

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